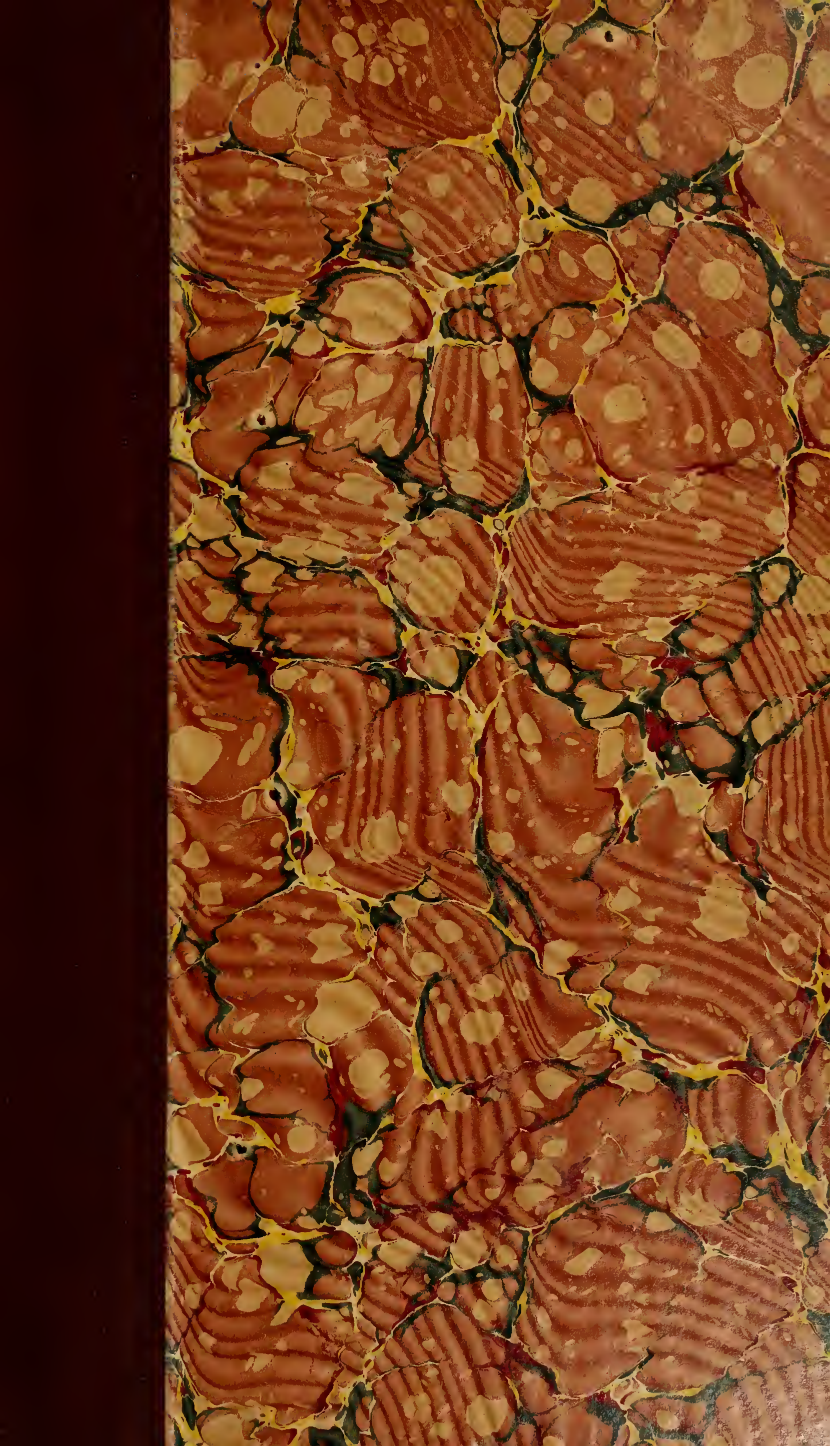

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The Charlotte Medical Journal

Vol. LXXVII CHARLOTTE, N. C., JANUARY, 1918. No. 1

EFFECTS OF ALCOHOL ON THE HUMAN SYSTEM.*

By Dr. C. M. VanPoole, Salisbury, N. C.

In this paper it is our purpose to consider the influence of alcohol over the tissues of the body in its voyage through the human system.

When we attempt to study the action of alcohol on the system, especially when we call to our aid the study of physiological laws, we find that it supplies no new matter and that it supplies but little or no force to living matter.

Ethlylic alcohol is the basis of all intoxicating drinks and it is by a study of its physiological action on the system that we approach most closely to the diseases caused by its use.

Alcohol is an intoxicant of chemical composition $C_2 H_6 O$ and should be regarded as an excitant and not, **per se**, a stimulant.

That we may fully understand the history of its voyage through the system we shall consider it under four heads or stages.

First Stage.

Alcohol may be administered in different ways. It may be given per orum, by subcutaneous injection, per rectum or by inhalation of vapor. The effects produced on the functions are the same, no matter by what mode administered. It is said that 30 grains of alcohol to the pound weight of the animal body will produce intoxication, while double that amount is productive of immediate danger. Increased action of the heart is the first symptom produced. Observation has shown that the heart's action is increased from fifteen to seventeen beats per minute. The period of rest between beats is shortened, though not as much so as might be inferred, for the contractions are sooner over. When alcohol has been taken continuously for a time and then suddenly discontinued, the heart will be very feeble. It is, therefore, not surprising that the brain and muscles, which depend upon the heart for their blood supply, should be languid and require the rest of long sleep for renovation. At first the vital functions strive mightily to maintain their normal condition, but if the strain is kept up, sooner or later they, too, will flag, the result of which is a complete physical wreck. While the heart is laboring under the influence of the alcoholic stimulus the peripheral circulation is quickened and there is an observable change in shades of color in exposed parts. It might be supposed that these changes only occur in parts exposed to view, but, on the contrary, they are alike throughout the whole body. The blood-vessels of the brain, lungs, kidneys, and all vascular organs, are alike injected and the parts engorged. The changes in color, which are only temporary in the novitiate, become confirmed and permanent if the alcohol be continued for a long time. The bloom on the nose is the mark by which the confirmed topor may be recognized.

We have said that the first effect of alcohol is to increase the action of the heart. It behooves us then to show why this is so and why the minute blood vessels are so much injected. Instead of acting directly upon the heart and causing increased motion and power of that organ, there is simply paralysis of the organic nervous supply of the vessels which constitute the minute vascular structures. This being the case there is less resistance offered and the heart, being thus liberated, quickens in action, dilating the paralyzed vessels, causing injection and engorgement of the same. These phenomena constitute the first action of alcohol on the system, and might well be termed the stage of excitement.

Second Stage.

When the effects of alcohol are carried beyond the first stage other changes are induced in the nervous system, more especially in the cerebrospinal system. It is impossible to say at present whether these changes are due to the direct action of alcohol upon the nervous matter, or whether it is simply due to the modifica-

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*Read before the Rowan County Medical Society at Salisbury, N. C., December 5, 1917.

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tion of the circulation in these parts. Be this as it may, we do know that there is a deficiency in the power of co-ordination of muscular movement. This is caused by a loss of nervous control over the muscles. There is but feeble response to the application of the electric current in this stage, and, the more fully the system is brought under the influence of alcohol the less will be the response to the galvanic stimulus.

These symptoms mark the effects of alcohol in the second stage.

Third Stage.

Next in order the upper portions of the brain become implicated. These being the centres of thought, the mind soon loses its equilibrium and the man is no longer rational. At this stage we frequently find these persons extremely passionate and emotional, the animal instinct being very conspicuously manifested. Soon there is a failure of the senses—insensibility, sleep and utter muscular prostration and relaxation. If examined at this stage there will be found a very decided decline in the temperature of the body which is said to have fallen as low as 93 1-2 F. It might be supposed that the decline has just taken place at this stage, but, on the contrary it has been going on through all the three stages of intoxication. It is true that in the first stage there is increased heat where there is increased peripheral distribution of blood and increased radiation, but, while this is going on there is a decline in the temeprature of the mass of the body. This decline goes on from hour to hour until it brings us down to the last stage.

Fourth Stage.

This stage is marked by extreme collapse of the muscular organs under the control of the volitional nervous centres. While in this condition there are observed at times strange automatic movements of the limbs which seem not to be controlled by any of the centres of volition, nor are they produced by any external stimulus. They are simply strange involuntary movements, which show that there is still some life in the spinal cord. The centres that supply the muscles of respiration and circulation seem to remain faithful to duty longer than any others, and when the end is death, it has been observed that of these the muscles of respiration fail first, the heart being the last to give way. Upon the slowness of action on these two centres lies the safety of the patient in administering large doses of alcohol. Were the action of alcohol uniform on the body or on the nervous centres, it would be extremely dangerous for any one to take it to the degree of intoxication. When the intoxicated live through the fourth stage the temperature may fall even lower than stated above, but, after diffusing through all the tissues, the alcohol escapes by elimination, slowly relieving the living centres, the result of which is a gradual return of power. This, then, brings us to the end of the symptoms observed in intoxication.

We might state, however, that alcohol, when taken in excess of the natural demands of the system, tends to overtax the oxygenating capacity and prevents complete oxidation of the proteids, which weakens the vital forces and develops diseased conditions. It is not **per se** a poison, but by preventing transformation of the proteids nutrition is much impaired. Its continued use also has a very deleterious effect upon the blood vessels constituting the minute circulation and upon the blood itself, especially the red corpuscles. Microscopical research has shown that they become irregular in form—that they shrink and are notched at their margins. It has shown, also, that there is an excess of fatty globules and that oxygen is absorbed with much less freedom.

Alcohol also acts injuriously upon the membranes of the body. Cases frequently occur in the experience of every physician where the skin, peritoneum, periostium, the conjunctiva have taken on diseased action entirely due to the abuse of alcohol. The different membranes of the body all have their respective functions to perform. Anatomists centuries ago held that their offices were simply to hold the different parts of the body in their natural and respective positions and to give mechanical support. It is known, however, that this is only a part of their office ,that they are really the natural filterers of the body, that they guard the ingestion and assimilation and elimination of all substances whatever. Now, when, from the inordinate use of alcohol, the mechanism of these membranes is interfered with, it will necessarily follow that the process of filtration will be inadequately performed. This being the case, the proper nourishment of the part the body depends entirely upon these membranes in their integrity. In some cases, from the continued use of alcohol, will be impeded. The nourishment of they are rendered so porous and relaxed as to allow the colloidal fluids of the blood to escape. The result is, the body slowly, but surely, dies. In other cases the membranes become thickened and loaded with foreign matter. The natural fluids then fail to pass through them; the result is, in some instances there is accumulation of fluid in closed cavities, while in others there is a dryness between membranes and substances inclosed where there should be free lubrication. There may be hypertrophy or atrophy, or, if there be no change in mechanism, there may be inactivity from anaesthesia. Either of these would interfere with their natural functional power.

Cell metamorphosis is hindered, nutrition is impaired, and, as a result, the function of the cell is lessened, for, there is observed a distinct change in the contents of the nerve cell. This is reasonably the retention of effete matter whose elimination is hindered.

When we consider the functions of the brain cells, especially the anterior lobes of the cerebrum, the importance of perfect physiological conditions is manifest We know that in the brain certain associations of cells called centres have control or inhibitory influence over many of the lower reflex functions, and there can be no doubt that they exist also in higher degree in the cerebrum, controlling the passions, instincts and appetites. Defects in this function mark the loss of self-control, and, in so far as they exist constitute mental alienation. The clinical aspect of a case of chronic alcoholism presents the results of this defective inhibition in numerous ways. The energy or reserve force of the cell is exhausted or hindered till continued mental effort is greatly weakened.

The victim of chronic alcoholism is in such a state of physical and mental weakness as to be illy able to withstand the onslaught of any disease. He is usually a man having the appearance of robust health, but a careful scrutiny will reveal this to be a delusion and a snare. His bloated and rubicund visage, his ponderous abdomen, and his full but soft fleshy parts are not indicative of health, and when attacked with disease, having no power of resistance, his chances of recovery are correspondingly reduced.

A REVIEW OF SOME PHYSICAL EXAMINATIONS MADE DURING THE FIRST SELECTIVE DRAFT.

By J. A. Hofheimer, M. D., Surgeon to St. Elizabeth's Hospital; Examiner for Local Exemption Board, District No. 170, N. Y.

The first selective draft for our new National Army has been completed, and the men have been sent to their respective cantonments to be drilled in the school of the soldier.

The methods used in their selection was to those who had a share in the work of the local boards a novel experience, and fraught with considerable worry and study.

The non-medical members of the boards were conscientious and tireless workers; while the medical examiners were taxed to their utmost to detect malingerers. These were of two classes, those who feigned disabilities in order to escape being certified, and those who endeavored to conceal their physical defects in order that they might pass the doctors.

The first class were the "slackers" pure and simple; the others were imbued with an exalted patriotic spirit.

We found that the majority of the men summoned for examination were ready and willing to enter into the service of the United States, but were only waiting to be selected. They expressed the feeling that they should have an equal chance with their neighbor, and were not called upon to give up home, business, etc., unless the other man did so too. We are living in a commercial age, and the business instinct seemed most rampant. The fact that we were engaged in a serious war had not struck home then.

Since so many of our boys have gone to the training camps, and especially since our Army has been under fire "over there," the realization of present conditions is taking hold, and I do not think that we will have as much trouble with the "slackers" during the next draft examinations.

Many attempted to foist false claims for exemption upon the doctors, producing, I am sorry to state, palpably untrue certificates from family (?) physicians.

Several sought refuge behind the proverbial petticoat, claiming exemption because the wife was too ill to earn a livelihood in the event of the man being taken away. Of course, many of these claims were legitimate, and the board invariably released the man when they were proven true. We sought to cause as little hardship to all as was possible, but many were distinct "fakes."

It would fill a very large volume to enumerate all of the schemes the slackers tried to perpetrate. I will briefly mention a few which happened under my observation while acting as the re-examination physician for Local Board No. 170, of New York City. The perusal of them may prove of interest to those who will have similar work to perform in the future draft examinations.

Case I.—This man was found physically fit until the hearing test was applied by Dr. Hammond, who was examining him. The doctor had the man stand with his back to him, and walked to varying distances behind the man, at the same time using different phrases, words, etc., in loud and soft tones. The man refused to make any response or to repeat a single word of the tests. Dr. Hammond then came up to about two feet behind the man and remarked, "I am a slacker, I do not believe in the draft." The man made no response, but I noticed that his face suddenly flushed and his lips tightened, so I said to him in an undertone, "Did you hear what the doctor just said?" He, taken off of his guard, at once replied "No." Dr. Hammond then in the same tone, but a few feet further back, said, "You may dress," and the man at once went over to the chair upon which he laid his clothes. He is in camp now.

Case II.—Was also physically fit, but when Dr. Burnham examined him for vision he found that the man was unable to read any type at any distance. The doctor then took a sheet of white paper and wrote on it with a red lead pencil the inscription, "I am a fakir," and hung it up on the 20-foot line. The man was asked to read it, and he at once jumped to his feet exclaiming "It's a lie, I'm no fakir." He also is serving the colors.

Case III.—This one was of the despicable type mentioned before, as hiding behind petticoats. He was a strong, healthy man of the sporting class, and had been married just a few weeks preceding the examinations. When he found that he had passed the physical tests, he furnished an affidavit to the effect that his had not been a "slacker marriage," but that he "had been intimate with his wife for two years previous to their marriage!" When this contemptible statement failed to gain him exemption, he brought a sworn certificate written by a physician upon his prescription blank which stated, "Mrs. ——— has had a persistent cough, and her brother died of pulmonary tuberculosis." The Board ordered an examination to be made of the wife, who proved by all tests, physically and bacteriologically, to be in robust health. We had to certify this person and permit him to associate with decent men.

Case IV.—Was of a man who claimed that he suffered from chronic stomach trouble, and was "unable to ride on the cars as he always suffered from car-sickness." In answers to queries concerning his occupation we were surprised to learn that he was employed as a worker on a switching engine by one of the large railroads in this city. He had been so employed for about eight years, and had never lost a day through sickness in that period. He was also certified.

Case V.—Showed a certificate from a doctor in which he stated that the man had "severe internal hemorrhoids, and was waiting for cooler weather to have a radical operation performed." This person also produced a jar of ointment as proof of his piles! Examination by myself and three other physicians of our board failed to detect any rectal disease. When informed that he would be certified, he became very indignant, and asked, "Do you mean to say that my doctor lies?" To which reply was made, "Oh, no, his ointment cured you."

Case VI.—Produced a statement from his doctor claiming that the man was a sufferer from Filariasis. This is a tropical disease which usually terminates in glandular involvement and elephantiasis. The filaria are found in the blood. We sent this man to the Willard Parker Hospital where an expert pathologist kept him under observation and examined his blood. He certified that there was an entire absence of any filaria, and that the man was healthy. He was further certified by our District Board.

It is a pleasure to chronicle in contradistinction to the foregoing cases the following ones, who though suffering from physical defects which would in calmer times prevent them from entering the various branches of the United States service, had made every effort to join the colors. Many of these men had attempted to enlist at the various volunteer recruiting stations, and brought to us slips which had been furnished to them stating the disability for which they had been rejected by the regular army officers.

Case VII.—Had endeavored to enlist in the marines, and his slip stated that he was rejected for "paralysis of the right eye." In fact, he had a glass eye on the right side, but excellent vision with his left optic. He puzzled the doctors, myself included, by his responses to our tests. His artificial eye was a splendid match, and had partial rotation in the orbit which made it appear almost natural. His physique was excellent, and he was certified to the Quartermaster's Department. He is serving on a U. S. transport now.

Case VIII.—This young man had an enormous varicocele, which he admitted gave him considerable annoyance especially after exercise. He was eager to enter the Naval Reserves, but had been rejected by their medical officers. When he came before us in the order of his draft number, he asked if anything could be done for him. When informed that a radical operation would be the best thing, he requested us to grant him time in which he could have it done; which we gladly did, and postponed his examination. He reappeared six weeks later, after a sojourn in the Post-graduate Hospital, and I had the pleasure of aiding him in achieving his desire. He has since called at my office to thank me clad in the uniform of the United States Navy.

Case IX.—This man had been born without his full allowance of digits, but was otherwise a magnificent specimen of young manhood. He was employed as a chauffeur on a motor truck, and was accustomed to handling heavy packages of goods. Dr. J. Gardner Smith, our medical director, agreed with me that if he could earn his livelihood in civil life at strenuous work, he ought to be able also to be of service to his country in a similar capacity ;especially as he was so desirous of doing his bit.

The patriotism of this man is illustrated in the following letter which was received by our Board:

Headquarters Co. K, 307th Regt. Inf.
Barracks 404-7th Street, Camp Upton,
October 6, 1917.

To Dr. J. Gardner Smith, Local Board No. 170, 290 Lenox Avenue, Manhattan:

Dear Sir:—It is with a great deal of interest I have read your letter of August 7, addressed to Benjamin M. Day, Secretary of the Mayor's Committee, extolling the courage and patriotism of Frank L. H———.

As you seem to have taken such an interest in this young man I am taking the liberty of writing you a synopsis of his adventures since he left your very evident paternal and kindly protection.

He arrived here on Sunday, September 30, and was assigned temporarily to a barracks, pending his examination. On Monday morning he went up for physical examination, and while qualifying in every other respect ran into the section of the army regulations providing that no man shall be accepted for service who has two fingers missing from either hand.

He was ordered discharged for physical disability, and reported back to the captain then having him in charge with this, to him, calamitous decision. He requested the captain to endeavor to do something for him but his commander, considering the case to be hopeless and being rushed with work, refused to bother about it.

H——— then started off on his own hook, and for 24 hours made life so miserable for the doctors at the examining hospital, trying to induce theme to reverse their decision, that they threatened to place him in the guard house if he returned again.

Tuesday, with 193 other recruits, he came into my command, and in my address to these recruits on their arrival at my barracks, I told them that the Orderly room door was open to all of them for advice, assistance, etc.

Immediately after my dismissal of the men, H——— came into the Orderly room with his case, and while I considered it a hopeless one, I was so impressed with his earnest desire to serve his country that I decided, hoping against hope, to take it up, and proceeded with him to the Examining Hospital.

You can imagine that our reception was very frigid, as they had considered H——— as consigned to the "scrapheap" for good.

I based my appeal for a re-consideration on three grounds:

1st—Having been born without the fingers, they were not missing.

2nd—Never having had them he had never learned to depend upon them, and was as dexterous in the use of his hands as the normal man.

3rd—His persistence in trying to serve his country and his self-evident patriotism was an example for the men (few in number, I am glad to state) who were using every means and device to avoid duty.

A re-examination by the doctors was granted for Wednesday at 10 o'clock and he was passed and mustered into the National Army at 2 o'clock p. m., October 3rd, to his great delight and joy, and to my satisfaction on receiving into my company a man so patriotic and dependable.

Sincerely yours,
Joseph A. Holahan,
Captain, 307th Inf., Commanding.

This man has since called to visit the members of the Board in order to express his thanks for efforts in his behalf. He was clad in his uniform of khaki, having on his sleeve the chevrons of a Corporal.

Our Board examined about 600 men, and out of these we found only 13 cases of venereal diseases; this is an excellent commentary on the social life of the young men of Harlem, where our district is situated.

In the main we found patriotism rising above self-interest, and cosmopolitan as our draft material was, we found the foreign-born element desirous to perform their duty to their adopted country.

The writer showed this paper to Dr. Smith this morning (Dec. 15), and he informs me that H— has just been promoted to rank of Sergeant for efficiency. Also in passing he asked me to note a tribute to this man's mother. She has given up the comfortable apartment in which she formerly resided, and has taken a furnished room, in order that she might live within the reduced income which her son could now allow her, and not make him delinquent in his duty. Truly a Spartan mother. With this spirit our country is bound to win.

123 West 126th Street.

GROUP MEDICINE—A PLEA FOR THE UNATTACHED SPECIALIST*

By J. Van Becelaere, M. D., LL. B., Detroit, Michigan.

There is in the northern part of France a small town, at present writing infested with the Teutonic plague, and suffering untold agony from the Hohenzollern Superman-ia. In that same town it was my good fortune to start in the practice of medicine more than a quarter century back, and under such auspicious conditions, that within the first year I was doing almost all the general run of surgery, medicine, obstetrics, ophthalmology, dentistry (such as it was!) and anything else presenting for miles around.

Young, ambitious, and inexperienced —in medical pin-feathers—(you know the saying about fools and angels!) I grappled, single-handed, with cases that I would now—after more than thirty years in practice—pass up with a shudder to men of better qualification.

I shall never forget, for instance, a double amputation of the legs, urgently performed on a bitter cold Christmas eve, in a track-walker's shack, miles away from professional assistance, by candlelight, sans anaesthetic, with the help of a lone section-hand, by means of a sharpened case-knife and a panel-saw—and my patient getting well! Nor the comminuted elbow fracture with which a thirteen year old boy nearly succumbed under chloroform, given by myself during intervals of reduction and plaster paris splinting, and patient revived by jolting him, suspended by the knees, head down, back to back, over my shoulders! Nor that case of old, ununited tibial fracture in a girl, seventeen years of age, where I was anesthetist, surgeon, nurse, dresser, and everything! Nor the old mayor whose strangulated inguinal hernia was reduced "en masse" by suspension head down on a ladder raised to the perpendicular! Confidence of patient and family, plus the need of making good ("Noblesse oblige!") were the main incentives. But, who would neglect to do the utmost for trustful and loyal patients, like the young butcher with a leg fractured at the lower third, who steadfastly declined all suggested medical attendance, electing to wait from Saturday eve to Monday morning, until I should set his fracture and suspend it in a hammock-splint, and whose confidence was rewarded by uneventful consolidation after four weeks, spent in greater part sitting beside his bed, and transacting book-business.

In those days we did not have the advantage of X-ray paraphernalia, but our cases got well just the same. Of course we had to be thoroughly trained and grounded in "tactile" diagnosis.

Hospitals, in my time, were government institutions, "clinical poorhouses," not the elaborate medical hotels of the present.

Many times, after a twenty mile tramp to my patients, I returned in time to extract a few molars, curette a cervical fistula, remove a nasal polypus, all sans even a local anesthetic (cocain had barely been admitted into the ophthalmologic armamentarium), before sitting down to my lamb-chop and "French-fried." Nor shall I ever forget the case of Miss L. whose father, owner of a large flouring mill, got me out of bed on a fine midsummer night. (No telephone or motor cars in those days, not even the modest "buggy," the adoption of which branded a "country doctor" in those regions as "a veteran, ready for the discard!") In view of the old gentleman's evident anxiety we ran the half mile to his residence, (he considerably winded), and arriving in the sick room were greeted with lamentations, expostulations and positive refusal on the part of an interesting society bud to be attended by the "young" doctor, when she had specifically wanted the "old" one, my only colleague in the place. To her father's tearful entreaties, and the statement that Dr. P. was at Comines (five miles away), on an obstetric expedition, she replied with virginal determination that she had "rather die" than have my attendance. Old Mr. L. could not imagine his only daughter dying, despite help at hand, as the result of false modesty, and (what between the joint and several objurgations of father, mother, and even the attending priest), I was finally suffered to make an examination, from which it appeared that the young lady, rather than go down the garden, at night, to the "place of easement," had relied upon a cracked porcelain receptacle which deceived her confidence, failed her in her extremity, and—breaking—had "wounded her in her dignity," cutting a not inconsiderable branch of the gluteal, which required immediate ligation. Not unlike some legal luminaries I could mention, "Necessity knows no law," and my interesting patient had to submit "willy-nilly" to my most unwelcome ministrations. A couple of Pean's hemostats, a pair of catgut ligatures, a dozen silk-worm gut stitches with Reverdin's needle, copious tears all around, and the deed was done, patient packed in bed, "a sad and wiser girl," and I went my way. Subsequent visits, appreciably more welcome, now the ice was broken, led to increasing confidence until one day, toward the last, my blushing patient, after considerable beating around the bush, enquired "whether the scar would show," to which I truthfully replied that "all would depend upon herself" (Of course!)

It is a far cry from those Arcadian times to the present days of intensive specialization. What with punctilious laboratory methods, aseptic surgical procedures, elaboration of diagnostic refinement, analytical metabolic chemistry, ponderous eponymic jargon, and other helps (?) the practice of medicine has encompassed such an immeasurable field, that no one but a neophytic plunger or an unconscionable mountebank would claim to "know it all."

The pioneer farmer, who could, single handed, manage his few acres, cannot possibly with his antiquated paraphernalia, make a success of the quarter-section domains of the present, and a similar condition obtains in medicine. The work has perforce to be divided, and parceled out to competent specialists.

Nor is this an unmitigated evil: concentration upon a limited field makes for efficiency through acquirement by personal studies, attendance upon post-graduate courses, etc. But in the measure that a specialist concentrates, he becomes painfully conscious of his limitations along other lines, extraneous to his chosen field, and endeavors to supply the deficiency. They say that Haroun-al-Raschid one day took exception to his grand vizier Giafar's assertion that there were numberless fools in Bagdad, but still more doctors. To settle the argument Haroun went forth into the city with his jaw in a sling, pretending toothache, and behold: every person he met suggested a "positive cure" for his affliction: all were playing doctor, thereby confirming Giafar's contention.

Next to giving advice in matters medical the human biped, (especially the "constipated" half—the female of the species) derives the greatest satisfaction from referring cases, often commending one or other practitioner upon merely hearsay evidence.

The physician, however, who refers a patient to some other confrere of recognized superior ability, contemplates either a "shifting" or else a "sharing" of responsibilities. In the first instance he must, perforce, relinquish all financial claims on the patient—since acceptance of anything in the line of compensation is deprecated, as unethical, by the profession. On the other hand a sharing of responsibilities implies a division of returns, either underhand (fee-splitting), or openly (divided fees). Since the financial returns are identical in both contingencies, invidiousness of the procedure appears to consist essentially in the surreptitiousness of this division. Affiliation with a medical group, however, allows of dividing fees openly, while apparently side-stepping this obloquy.

Woe therefore to the referred patient, unless he fall in with a thoroughly competent and conscientious group; while, in the first alternative, an honest physician becomes a mere diagnostician, a sort of animated sign-board, directing right and left—and without remuneration—all cases he does not feel competent to attend in better manner than any other practitioner of his acquaintance.

But here is the "hic": "Without remuneration!" And where, if you please, is he going to make—let alone a mere living, but also—the wherewithal to put up the necessary "front?" In the cities, at least, the tendency has been for a doctor to make as big a splurge as possible: if A runs a modest Ford, B sports a Maxwell, C a Studebaker, D some brand of limousine, and E would gladly navigate an aeroplane of the latest vintage, if he could in such manner convince the dear public that "he" is the "best" doctor, for has he not the most expensive and exclusive conveyance?

Verily, there are more ways than one of "throwing sand in the eyes" ("jeter la poudre aux yeux," as Frenchmen say), of the people, who—true to Barnum's postulate—"want to be humbugged!" Incapable of discerning true merit and judging only from accessible data—the outward appearance of prosperity—numerous patients flock to the professional mountebank, while ignoring the modest, plodding practitioner who neglects, fails, or is unable to cut so wide a social swath.

Medical advertising is the natural consequence of commercialization, and in group medicine, as in other commercialized pursuits, the "department store" is bound to draw the bigger trade. This applies of course, and most exclusively to those professional arrangements in which "all is grist to the mill" and where any patient, whatever his ailment, is referred to either B or C of "our" group, all treatment by the rest of the profession, "the unaffiliated," being dismissed without consideration, or at best "damned with faint praise."

Commercially speaking a medical group is a medical firm, and if managed with financial efficiency, adopts—de facto—the slogan of "one for all, all for one." Individual earnings are pooled, totaled and divided, pro rata of the "stock" put in the concern. That this stock be in the nature of professional influence, pull or "torque," instead of numerable units, (viz $$$) does not change the matter, and if a patient apply for treatment, along surgical lines for instance, he is referred to doctor B, not because B is the most competent specialist to be had, irrespective of affiliations, but only because B is the best surgical member of said group. Any case that can possibly be referred to B shall surely go to him, if anything A and C can do will add the prospective fees to the common exchequer.

Far be it from me to condemn the strictly ethical association of truly scientific men, actuated only by the welfare of their eventual patients! Human nature, however, is so constituted that not until materialization of the millenium shall any one, short of an ascetic altruist, voluntarily forego the prospective dollar and what it stands for, to relinquish all possible source of material income for the cult of disinterested, esoteric altruism!

Granted even there may be among the hundred of physicians in our acquaintance a round half dozen, potentialized with the truly divine afflatus, and granted that banishing all petty personal motive, stifling invidious promptings of professional jealousy (Medicus medico lupus!) discountenancing possible inuendos and disparagement, spoken or implied, these half dozen professional Galahads get together and found a medical group, how long will they functionate before a case occurs that neither of them is absolutely qualified to handle? Then, either they jointly and severally confess their incompetence, and—noblest, most unselfish course of all—inform the patient of their limitations, advising him to call on doctor X who, while outside the pale of their association is more capable of making good, or else (and this is the probable course) withhold from said patient information they possess and which might save him considerable expense and misery, while they keep the trustful "prospect" among themselves, "for revenue only!"

For the same reason that we do not entrust our chronometer to the garage man, nor our auto to the watch-maker, we should not refer our brain cases to an abdominal surgeon, nor our mastoidites to an operating genitalist, but in candid honesty we should "render unto Caesar" and,—recognizing our limitations—refer the "problems" to competent specialists.

From the standpoint of the patient, as well as that of common decency, cases should be referred for clinical or therapeutic reasons only. To him the sole question is: "Where shall I find the doctor most competent to help me out of my trouble?" All other considerations are superfluous, except perhaps that as to where he may secure the best services at the least expense.

If actuated entirely by the patient's welfare, the conscientious practitioner sends him to the most competent specialist he knows of, disregarding, as in duty bound, any consideration of financial returns.

What the profession requires, therefor, is not the coalescing of medical units into small, self-seeking conglomerations, but the development of **diagnostic units,** passing upon and sorting out "cases" with the aid of all scientific appliances, and referring them, impartially, and irrespective of geographic or financial considerations to that man, or list of men, whom experience and enlightened opinion have pointed out as most competent in coping with their difficulties.

While, as an abstract concept, group medicine is an ideal institution, and—granted the proper personnel—may work to decided advantage in small communities, it forcibly tends, in larger medical agglomerations, to the creation of invidious distinctions and comparisons, and may foster a spirit of selfish commercialism, derogatory to the character and mission of that most unselfish and altruistic of human pursuits, an institution whom the Ancients held in such esteem as to consider her of divine origin, even placing her under the tutelage of special divinities: the noble profession of Medicine.

400 Dix Ave.

CLINICAL RESULTS WITH PHYLACOGEN.

By C. E. Ferguson, M. D., Washington, D. C.

Several years have elapsed since the Phylacogens were first offered to the medical profession. During that time they have indicated that they are of great value in various diseases. They present the latest development in biologic products, and their field of therapeutic efficiency is a broad one.

Phylacogens are entirely different from therapeutic serums and bacterial vaccines, and should not be called by either of these terms. As the name implies serums are derived from animals and represent antitoxic bodies contained in blood serum. Vaccines are suspensions of dead bacteria in physiologic salt solution. They contain the bodies of the bacteria from which they are made, and in this way differ from Phylacogens, as these latter preparations are composed of substances formed by bacterial growth on special culture media. They contain no insoluble bodies and are readily absorbed into the circulation after subcutaneous injections.

The dosage of Phylacogen varies from 1 to 10 c. c. subcutaneously, and from 1-8 to 5 c. c. intravenously. It is always advisable, we are told, to give the first injection subcutaneously, so as to determine if the patient has any peculiar idiosyncrasy toward the product, as we occasionally find is true of patients in response to proteid substances. It is true that intravenous injections appear to bring prompter benefit, but in a great many cases, in fact in the majority, subcutaneous injections will be found entirely satisfactory. In nearly every instance, following subcutaneous injections, there appears a local redness and tenderness, as an indication possibly of a specific local action on the part of the body cells as the preparation comes in contact with them. In addition to this, following large doses subcutaneously and most doses intravenously, the patient manifests general symptoms, such as chill or chilliness, rise in temperature, increase in pulse rate, occasional nausea and abdominal cramps. Almost any combination of symptoms may appear. But in the majority of cases, the dose may be so regulated that the constitutional and local symptoms are sufficiently mild not to seriously annoy the patient.

It is not difficult to administer Phylacogen successfully. It is true the intravenous method requires a certain skill in technique, but this is easily acquired if the practitioner so desires; but subcutaneous injections require no more skill or experience than hypodermatic injections of any other preparation.

Possibly the most important single item in Phylacogen therapy is careful diagnosis. Thus, for example, a case of rheumatic arthrities will respond promptly, as a rule, to Rheumatism Phylacogen; but when the arthritis is caused by gonorrheal infection ,then it becomes necessary to employ Ghonorrhea Phylacogen, as Rheumatism Phylacogen has no power to control a process caused by gonococcus. Right at this point is where most failures in the employment of Phylacogen occur. Many times it is difficult to obtain a history of specific infection, hence the practitioner is misled in his diagnosis. For that reason it is always advisable, in the event that Rheumatism Phylacogen fails to benefit, to resort to Gonorrhea Phylacogen, as a therapeutic test.

The fact has apparently been accepted by the medical profession that rheumatism of the true type is caused by the streptococcus rheumatism, discovered and named by Poynton and Paine. It is also conceded that the specific streptococcus enters the circulation in many, if not all, instances through severely inflamed tonsils. It is therefore entirely logical to administer Rheumatism Phylacogen in many cases of tonsilitis, especially if there are pains in the joints or any other indication of the possible onset of arthritis.

As an indication of what may be expected of Phylacogen therapy the following cases may be quoted:

Case 1.—Age, 18; sex, male; occupation, clerk.

History: The case started with a severe tonsillitis. Abscesses formed and had to be lanced. Two weeks later the knee commenced to be involved. It became painful and swollen; and the patient was confined to bed. The salicyllates were given with no results.

Treatment: First dose Rheumatism Phylacogen 2 c. c. subcutaneously; second dose Rheumatism Phylacogen 3 c. c. subcutaneously; third dose Rheumatism Phylacogen 4 c. c. subcutaneously; fourth dose Rheumatism Phylacogen 5 c. c. subcutaneously; fifth dose rheumatism Phylacogen 5 c. c. subcutaneously.

The pain disappeared, but knee was swollen and stiff. With an aspirator one-half pint of fluid was removed and knee commenced to improve.

The patient later recovered fully.

Case 2.—Age, 20; sex, male; occupation, printer.

History: Patient suffered severe sore throat with temperature of 105 to 106 deg. and was for one week delirious. Eight days later the throat was much better, but the knee became sore and swollen. Salicylates and liniments were used with no result.

Treatment: First dose 2 c. c. Rheumatism Phylacogen, gradually increased, until two bulbs in all were used with no improvement. Gonorrhea Phylacogen was then started with small doses. Two bulbs in all were given, also one bulb of Mixed Infection Phylacogen. Short time thereafter the swollen knee was opened and about four ounces of pus was removed. Patient commenced to get better and later recovered entirely.

It will be noticed that it was necessary to open the swollen knee and remove the pus before the recovery was complete. It is quite evident that proper surgical measures should be employed to supplement the injection of Phylacogen.

Case 3.—Age, 7; sex, female.

History: Acute Articular Rheumatism developed with a temperature 99½ deg., pains in the joints. Patient could not walk; was confined to bed.

Treatment: Started with ½ c. c. Rheumatism Phylacogen subcutaneously and gradually increased for about two weeks. One bulb in all was given. After the third dose the patient commenced to improve and fully recovered.

The important point in this case is the age of the child, which indicates that Phylacogen is equally valuable in children and adults.

Case 4.—Age, 32; occupation, railroad man.

History: Infection following injury of hand in accident. The infection extended to arm. Free incision was made but little improvement followed.

Treatment: One bulb Mixed Infection Phylacogen was given in small doses of 1 c. c. each subcutaneously with full recovery.

The value of Mixed Infection Phylacogen in this class of cases cannot be overestimated. Its value here will enable surgeons to successfully combat many infections that commonly follow accidental injuries.

Case 5.—Age 25; sex, male; occupation, dentist.

History: Chronic articular rheumatism had existed for some time. Ankles and knees were stiff, and patient suffered much pain and walked with difficulty, requiring the assistance of a cane. All the usual treatments were used with no benefit. Patient also had endocarditis.

Treatment: First dose subcutaneously, 4 c. c. Rheumatism Phylacogen with marked reaction and chill. Injection was made at night. There was also shortness of breath and a pulse of 140. Next morning patient was better. Second dose 5 c. c.; moderate reaction. Patient could walk without a cane. Three bulbs in all were given. Improvement began after first dose and recovery was complete. The heart trouble also improved.

Case 6.—Age, 84; sex, female.

History: Acute articular rheumatism with involvement of the knee and wrists which were swollen and painful. Patient confined to bed.

Treatment: First dose 1 c. c. Rheumatism Phylacogen subcutaneously, increased gradually to 3 c. c. Two bulbs in all were given, with complete recovery.

The foregoing patient was 84 years old, and the fact that she made a complete recovery was indeed surprising, as at that age death or chronic invalidism is the usual outcome.

Case 7.—Age, 35; sex, male; civil state, married; occupation, clerk.

History: Rheumatic iritis developed in both eyes. There was a past history of rheumatism. The usual treatment was used with no results.

Treatment: First dose Rheumatism Phylacogen 5 c. c. subcutaneously with severe reaction; second dose Rheumatism Phylacogen 5 c. c. subcutaneously; third dose Rheumatism Phylacogen 5 c. c. subcutaneously; fourth dose Rheumatism Phylacogen 5 c. c. subcutaneously. Cured the iritis.

After second dose patient commenced to improve. This was about two years ago, but last August patient had an attack of rheumatism together with gonorrheal infection. Rheumatism Phylacogen was used together with Gonorrhea Phylacogen, also Mixed Infection Phylacogen starting with 5 c. c. and increasing to 10 c. c. Twenty bulbs in all were given with no improvement.

It was especially gratifying that Phylacogen cured the rheumatic iritis. Why it failed to benefit the subsequent attack of arthritis is difficult to say.

Case 8.—Age, 35; sex, female; civil state, married.

Therapeutic Agent: Rheumatism Phylacogen and Gonorrhea Phylacogen.

History: Patient suffered pains in right shoulder and elbow, with a great deal of fever. She was confined to bed.

Treatment: Rheumatism Phylacogen was started with a small dose of 2 c. c., gradually increasing. 15 c. c. in all were given. Pain was relieved but recurred a few days later. Fever subsided and pain shifted to left shoulder. Rheumatism Phylacogen was given again until a total of 15 c. c. had been injected with no benefit. I then gave Gonorrhea Phylacogen, starting with small dose. Patient commenced to improve and after three bulbs had been given recovery was complete.

The foregoing case is interesting owing to the fact that Rheumatism Phylacogen was given with no benefit while Gonorrheal Phylacogen produced a complete recovery, thus indicating that the infection, although apparently rheumatic, was really gonorrheal.

My experience with Phylacogen is sufficient to convince me that these latest biological agents are of great value in properly selected cases.

THE SOIL POLLUTION DISEASES AND THEIR CONTROL.*

By D. C. Absher, M. D., President N. C. State
Health Officers' Association; First Lieut.
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Field Director International Health
Board; Formerly Full-Time
Health Officer for Vance Co.
and City of Henderson,
N. C.

The fact that this is next to the last paper on the program reminds us that "art is long and time and time is fleeting." The subject of my paper recalls other words by the same author: "Dust thou art to dust returneth was not spoken of the soul," practically everything else, however, sooner or later returns to mother earth from whence it came. Some organic bodies may return to earth and be reduced to dust without the assistance of living matter, but, while such a possibility is recognized, we must recognize the fact that living organisms of some kind are found in practically all decomposing matter, and this is true in the vegetable kingdom no less than in the animal kingdom.

What I have just said is well known to those who have had even a little bit of scientific training, but I dare say that few have ever grasped the true significance of these things and applied the knowledge to their every-day lives. This failure to apply the knowledge that we have at hand gives me my only excuse for offering this paper.

The fact having long since been established that bacteria are every-where present, the question arises: How can we avoid these bacteria and their action? That question must be answered with the statement that we can not avoid all bacteria; in fact we do not want to avoid them all, for only certain of them are harmful, the others are perhaps helpful. Those which are harmful are such because they produce diseases, and they are the ones which should not be entertained in our bodies, in our homes, nor on our premises. If, perchance, they gain entrance into our bodies, by stealth as it were, as they very frequently do, and often without producing any manifestation of their presence, we should be most careful to see that on their escape from our bodies they may not injure our neighbor; in other words, the soil must not be polluted by the presence of these disease producing organisms, either from the sick or the well.

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*Read before the Arkansas State Health Officers' Association, Little Rock, August 23, 1917.

Now, what diseases are caused by soil pollution, and how are they caused, are questions which might be asked. For practical purposes we may say that the soil pollution diseases are those which are caused by germs which are contained in the excrement passed from the bowels or bladders of persons who are either sick of the disease or are carriers of the disease; and that when that germ-laden excrement is not properly disposed of, the germs may gain entrance into the bodies of other persons by being carried to the food by flies or by being carried into the water-supply by poor drainage conditions.

The fact that the germs of typhoid and dysentery are passed from the bowels of persons sick with those diseases is conceded by all who know anything about it, therefore we need not discuss that point. The fact the eggs of hookworm and other intestinal worms are passed from the bowels of those harboring the parasites is also conceded and needs no discussion. Persons who have intestinal tuberculosis unquestionably can and do pass the germs of that disease from the bowels; thos having pulmonary tuberculosis may swallow sputum and then pass the germs from the bowel, indeed, many authorities say that in the majority of instances tuberculosis is primarily an intestinal infection, the organisms passing from the intestines through the blood stream to the lungs. More than one worker has claimed that pellagra is caused by intestinal organisms, or their toxins, and some of those investigators have produced at least some evidence to corroborate their claim. The bacillus of influenza or la grippe has been demonstrated in the intestinal flora—but why go further? If one-half of what has been said is true, unquestionably public health work for the prevention of soil pollution is of the very first importance. Going along hand-in-hand with such work should be that other work which has to do with the common house fly, and the source of the water supply.

As stated in the outset, practically everything must sooner or later return to mother earth from whence it came. This applies to the bowel discharges together with all its bacterial flora. How so to dispose of that matter as to prevent its being carried to the food by flies, and to the water supply by poor drainage, is the task before not only this body of health workers, but it is the task that we must place before all our people. We must teach them, show them, and arouse them until we get them to do something toward the solution of this ever-present problem.

It is true that inoculation against typhoid has proven very effective wherever it has been used, but its use thus far has been so limited that we cannot fail to consider the causative sanitary conditions. To control hookworm disease, treatment of those infected is very effective, but thousands of the infected have never been examined microscopically, and many of those found infected have never taken the treatment, but we know that whether they are examined and treated or not, if sanitary closets are installed and used the disease soon disappears. As to dysentery, there is no effective control other than screening against flies and proper disposal of human excreta. In tuberculosis the proper disposal of the bowel excrement may play only a minor role, still it must not be overlooked. In every infectious disease human excreta should receive proper attention in its disposal.

In a campaign to control the soil pollution diseases in a given county or community the first thing to do is to make a complete sanitary survey of the territory to be covered. In making such a survey every home should be visited and a history secured of the past health condition of teh family, and advice or literature suitable to that family's particular needs for disease prevention should be given; then the screening of the house, the source of the water supply, and the location and type of privy should be investigated.

In eastern Arkansas where the prevailing water supply is from deep driven wells not much improvement along that line can be made; in other sections it is important to see that the privy is on lower ground than the well, that the open well be closed, that a pump replace the chain and buckets, and that drainage is away from the well rather than toward it.

Needless to say, in the average rural community and country town the great majority of the people use the old open-back, insanitary privy. Flies swarming from privy to dining table is a sight too frequently seen to need description. How so to dispose of sewage matter as to prevent soil borne diseases, or, in other words, how to get privies improved, is then the question of the hour. This problem embraces two points: 1. How to move the man to do his part; 2, how to improve the privy.

The first point is a matter of educating each individual. Each man must be dealt with in a different way, and this perhaps is one of the hardest and most intricate sides of public health work. I shall not take time to discuss it here.

The second point has to do with types of privies. All authorities agree that flush closets connected with a public sewer are the best, but for a poor man in a small town or in the country what are we going to advise? In towns having a responsible government which can be depended upon to institute and maintain a reliable scavenger service, we advise as a minimum requirement, the bucket system. Wherever an individual is sufficiently interested and feels financially able to make a greater improvement, we advise the concrete septic tank. In rural communities, if, after a thorough investigation of the soil formation, de deem it safe, we advise as a minimum improvement, the pit closet. In both pit and septic tank we get the effect of helpful bacteria through their nitrifying action. (These three types of closets are described in more detail in a leaflet of the State Board of Health).

The Arkansas State Board of Health is now conducting, in counties asking for it, a campaign against soil pollution diseases. Such a campaign includes a visit and survey of each home, examination and treatment for hookworm disease, administration of typhoid vaccine, installation of sanitary closets at each home, together with educational work by means of lectures, newspaper articles, literature, and personal instruction to individuals. A campaign of this sort is directed by a physician and he is assisted by three other workers. Counties desiring such a campaign can secure it by agreeing to pay one-half the cost which amounts to about $250 for the county per month, the other half of the cost is paid by the International Health Board through the State Board of Health. It requires about one year to complete a campaign in the average county.

In the opinion of many, the full-time county health officer is destined ultimately to be the chief means by which all public health work will be carried on, but speaking from an experience of several years as a full-time county health officer I want to say that the man who attempts such work in a county in which there has been no preliminary campaign, such as that of the U. S. Public Health Service, or the nIternational Health Board, will have hard sledding ahead, at least for a time.

The soil pollution diseases are responsible for twenty per cent. of the preventable mortality in the United States and for a much higher percentage of the prevalent morbidity and inefficiency. Their control is therefore of primary and fundamental importance. A campaign to control them furnishes the proper foundation for preventive work against all diseases, and such a foundation is most urgently needed in practically every county, and I believe that the campaigns will result in the establishment of a system of county health work which will be useful, permanent, and if need be, elaborate.

HYPEROPIA—ONE OF THE CAUSES OF CROSED EYES.*

By Dr. H. M. Bonner, New Bern, N. C.

Mr. President and Gentlemen of the Onslow County Medical Society:

I don't know that the title of this paper as given to your Society is very satisfactory, possibly it might better read, "The Relief of Hyperopic Errors of Refraction."

We speak of an eye as Emmetropic, when the ciliary muscle being in a state of rest—rays of light emanating from an object twenty or more feet distant—parallel rays—focus on the macula, the central point of vision.

The Myopic eye is the long eye, parallel rays focusing in front of the retina. It is spoken of as the sick eye because of the tendency of the sclera to stretch more and more. The thinning and stretching of the sclera persists usually until several years after the patient has reached his or her majority.

Hyperopia is that refractive condition in which parallel rays focus behind the retina.

The Myope, the patient with the long eye, nearsighted, complains only of poor vision, never headache nor other reflex disturbance from refractive error—and because he does not, does not have to, and can not accommodate.

The Hyperope, the patient with the short eye sees nothing clearly except by reason of accommodative effort. If this patient has an hyperopia of one or two Dioptres only, he will experience no trouble except by reason of complicating astigmatic error.

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*Read before the meeting of the Onslow County Medical Society at Jacksonville.

The astigmatic error may give rise to various reflex disturbances, headache worse in the afternoon and evening; styes, coming usually in crops—one after another, Blepharitis, red eyes, or a feeling of sand in the eyes.

Headache from astigmatic error is reflex from the uneven pull of the ciliary muscle and is due to fatigue. The result of constantly changing accommodation, as from riding on a train. The patient is constantly changing her accommodation, looking first at a paper magazine, next at some one entering the car, then at a crying baby, the "News Butcher," or at some passing object seen through the car window.

Likewise, a shopping tour or moving picture will induce such a headache. I have seen such reflex ocular headache from so slow a process as riding in a buggy on a country road behind a farm horse.

The short or hyperopic eye with no astigmatic error is not a prolific source of headache. In fact, I have not seen any headache that I could attribute to simple hyperopia.

Patients having six or more Dioptres of Hyperopia see poorly. They cannot accommodate sufficiently to see clearly, hence in reading they bring the print close up to the eyes and see in diffusion circles. The layman says that this patient is nearsighted. We call them "psendomyopes."

Two years ago a woman called at my office asking that I examine her eyes for glasses. A few minutes later she asked, "Do you know why I came to you to have my eyes examined?" Receiving a reply in the negative, she said "a year ago you examined my daughter's eyes, up to that time when ever she wanted a needle threaded, day or night, she had to get someone else to thread it. For the past six months when I have wanted a needle threaded—I have had to get her to thread it for me." I remembered having told her daughter that with her new glasses she would see as she never had seen before. Her daughter's new glasses were as follows:

× R+6.00+2.00×100
L+4.00+2.75× 80

This correction being three times as great as she had been wearing.

On November 11th, 1913, I refracted T. H. W., age 7 years, from Trenton. His vision with his correcting lenses was as follows:

R+8.00+3.50×100=10/40—11
L+8.00+3.00×100=10/40—11

I had occasion to refract this boy again on September 7th, 1915, finding his vision and correcting lenses as follows:

R+8.50+3.00× 85=20/40
L+8.00+3.00×100=20/40

On March 20th, 1913, I refracted R. T. B., age 10 years, from Aurora with the following finding:

R+4.00+.50× 75=20/40
L+4.00+.25×105=20/40

Again on September 7th, 1915, I refracted this boy with findings as follows:

R+4.00+ .75×100=20/20
L+4.00+1.00×110=20/20

You notice that the error in these cases is of more than four Dioptres. Hyperopia—really five or more according to the shadow test.

If the eye be only three to five dioptres short, it can accommodate as a rule, sufficiently to see clearly. And when the eyes do accommodate, accommodation and convergence being simultaneous acts, one eye gets tired, converges excessively and continuously. Thus we have a crossed eye—the result of Hyperopia. The brain centers soon leave to take no notice of things seen by the crossed eye and in course of time the eye becomes amply opic, practically blind, from non-use.

In these patients, the eye crosses shortly after the patient begins to look closely and carefully at objects—that is during the third or fourth year.

Just as congenital hernia may be cured by a truss up to seven years of age, so may this cross eyed condition be relieved by correcting lenses up to about the same age. Or, perchance, should the strabismus be alternating and of slight degree, vision being good or fair in both eyes, the same satisfactory result may be secured at a still greater age.

The parents can always give some reason to account for the crossed eye but it usually bears the same casual relation that the fall does to the idiotic child. The cause, except only the muscular paralysis, is generally found to be Hyperopia of three and a half to five dioptres.

Refractive errors in patients less than fifty years of age can be determined correctly only after the accommodation has been paralyzed. The remedy, par excellence, for this purpose, being always Atropin, if the patient be not over twenty years of age. Homatropin is usually satisfactory after that age.

I prescribe in children and adolscents Atropin in 1 per cent. aqueous solution—directing that one drop be instilled in each eye three times a day for three days—the patient to be brought to the office for refraction on the following day. Having paralyzed the ciliary muscle thus, I proceed to do a retinoscopy, the shadow test, determining the error of refraction thereby, proceeding then in these little tots who cannot read to prescribe glasses for the relief of their strabismus. The child need not be older than three years and need not know a single letter. Children do not take to glasses well at an earlier age but do very well after their third birthday and break no more lenses than do grown people.

Proceeding as per above, I refracted on March 14th, 1913, W. M. N., age 3 years, 4 months, from Vanceboro. Marked internal strabismus, and prescribed thus:

R.E.+2.00+.25×90
L.E.+3.00

When I saw this boy again, about 90 days later, his eyes were perfectly straight. I refracted this patient again on March 17th, 1916. His refraction being practically the same, his eyes straight.

On January 8th, 1917, I refracted J. I., age 4 years, New Bern. Marked internal strabismus. I found about four dioptres Hyperopia and prescribed glasses for him, accordingly. I have been unable to find copy of prescription). When they brought this boy to my office six weeks later his eyes were perfectly straight.

On February 19th, 1917, I refracted G. T. V., age 11 years, New Bern. Alternating strabismus. For this boy I prescribed:

R.E.+5.50
L.E.+5.50+1.75×90

I met this boy on the street three weeks after delivering his spectacles and observed that his eyes were perfectly straight. About April 1st, the boy told me that whereas, before getting his glasses he had always had to learn his lessons in the afternoon. He then could play all the afternoon and learn his lessons at night. Not only are the eyes straightened but their vision preserved.

It is not possible to report the visional improvement in all cases, nor in all of these, since many parents and patients are exceedingly negligent in the care of their vision. They forget, if ever they knew, that the eye is a living organism and changes from time to time, thinking apparently that the one correction should be correct for all time. Still, a few of these patients, having been told that if they would take the best care of their eyes should have them examined every twelve or fifteen months, return after a variable length of time, and we are then able to report in a few cases the improvement in vision.

This paper is not intended as a case report, else I should have sought the return of many patients whom I have not recently seen, but rather to call your attention to the fact that not only may patients suffering ocular headaches and other reflex disturbances from astigmatic error be relieved by proper correction, but that not all apparent myopia is true myopia, some of it being psendo-myopia and susceptible of wonderful visual improvement. Further that crossed eyes are due largely to refractive errors and that in children up to seven years it may be relieved by glasses and the vision preserved in the crossed eyes. Lastly, that all patients whose vision is below normal should avail themselves of a thorough examination with all the benefits that may be had from treatment whether by drugs, hygienic directions or correcting lenses.

WHY PUT A BAND ON THE BABY?

By I. L. Van Zandt, M. D., Ft. Worth, Texas.

I was taught during the session of '60-1 by Professor A. H. Cenas, and of '65-6 by Dr. S. E. Chaille (not yet a professor) how to wrap the cord—to take a circular piece of cloth, the diameter of which was a little more than twice the length of the stump of the cord; cut a hole in the center; pass the stump through the hole, wrap the cloth around and tie with a string.

An old negro woman taught me later what might be more in accord with modern science, that the hole should be burned out. She also taught that the cord should be turned upward, to prevent the baby becoming a bed wetter. A better reason is that the cord is further from the boy's penis and not so likely to become wet with urine.

None of them told me that I might look for a mass of urinous putridity in this cord and its wrappings, and as a consequence a sore navel. I soon found that a "burning question" among the doctors and nurses was "what is good for a sore navel?"

This went on for about fifteen years, when some one, I think Dr. E. J. Beall, told me he was using no bands on babies. I was somewhat impressed with the idea, but not enough to prevent my having one put on my next boy—March 28, 1881. In about a week my wife told me that the baby had a sore navel. I told her to take the band off, and that was the last of that sore navel, the last one to occur in my practice. Since then I have followed nature and left the cord to dry up as it does on a calf or a colt..

How does nature cure an aseptic wound? It scabs it over and lets it alone. So here the cord being cut about an inch long, the Wharton's jelly makes a scab over the wound, that is to be, protecting it thoroughly. This drops off ordinarily in about five days, leaving a clean healed navel. Occasionally, probably from leaving the cord too long, so as to catch against the napkin, I have had the cord come off prematurely causing a little bleeding. The worst that comes from this is the scare to the mother and nurse. Contrast this with what occurs when a band is used. Evaporation cannot occur because of the wrappings, besides the band and the cord on a boy are wet with urine practically all the time. The mass has a rotten odor and the skin becomes irritated from maceration in the putrid urine, while in the case of the uncovered cord, the little urine that comes in contact with the cord dries off in a little while without harm.

Which manner of caring for the navel offers the greater chance for sepsis, omphalitis, erysipelas, etc.?

One professor of obstetrics said he would as soon think of turning a cut finger loose without wrapping. I told him that to make the comparison fair, he would have to dip the cut finger into urine occasionally, keeping it wet therewith.

Another professor said, "What about umbilical hernia?" I told him I had seen one calf, one colt and one pig with umbilical hernia, and I supposed that they had the same kind of bands as their brothers and sisters.

Besides there are many more cases of inguinal hernia than of umbilical, and I am not sure but a tight band might have a tendency to put a strain on the ring which had but recently, and perhaps imperfectly closed after the testicle had passed through it.

Again I ask, "Why put a band on the baby?"

658 Henderson Street.

Scarlet R in Certain Diseases of the Conjunctiva and Cornea.—Kirkpatrick, in The Indian Medical Gazette, says that he has found the use of scarlet R to be so beneficial in atrophic conditions of the conjunctival and the corneal epithelium that he thinks it worth while to draw attention to its value.

Scarlet R has been recommended for use in corneal ulceration, but he has found it much more effective in xerotic conditions. Its use was first suggested to him by seeing it recommended by a writer in The Journal of Laryngology as a stimulant to the epithelium in atrophic rhinitis.

He first used it two years ago in the case of a woman who was suffering from a very severe xerosis of the conjunctiva and cornea which had followed on trachoma. The condition was a long-standing one, both corneae were quite dry and insensitive, and the conjunctiva completely xerotic, with shrunken fornices. Vision was reduced to the perception of large objects near the face. Scarlet R in castor oil was dropped into her eyes daily, and in a short time Kirkpatrick was surprised at the improvement that took place. The conjunctiva softened and became more elastic, whilst the cornea became clearer and allowed watery solutions to spread over it. Eventually it was found possible to repair the fornices and she acquired useful vision.

He also found it most valuable in cases of the chronic pannus and superficial ulceration of the cornea which sometimes persists in trachoma after the conjunctiva has cicatrized.

The strength used has been from ten to forty grains to the ounce, according to the amount of reaction excited.

In addition to these Alcresta Tablets of Ipecac, as this product is known, Eli Lilly & Company, the manufacturers, have recently added to their extensive line, an ipecac laxative tablet called Ipelax—a combination of the usual A. S. & B. with the addition of the equivalent of five grains of ipecac in each tablet, a dose heretofore quite unusual in a tablet without an enteric coating.

Interesting researches are being conducted at the Lilly Scientific Laboratories, and in the light of already published information it would seem that ipecac is entering upon a new era in medicine. Interesting literature will be sent our readers by Eli Lilly & Company on request.

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EDWARD C. REGISTER, M. D., EDITOR.

CHARLOTTE, N. C.

EVERY DOCTOR, IN THE MEDICAL RESERVE CORPS.

What an ideal situation it would be, if every doctor in the United States who is mentally, physically and morally fit, was in this Corps.

The time is coming, and in the immediate future, when the Medical Reserve Corps of the Army must be immensely augmented, and so as to enable the Surgeon General to have at his command for immediate assignment, as conditions demand, a sufficient number of trained medical officers, let us take the above thought seriously.

We all know, from past history, the conserving value of an efficient medical corps ,and this means number, as well as training.

A statement made by one high in authority in the Surgeon General's office, "that our fighting forces would be disseminated by sickness and casualties in six months, were it not for an efficient army Medical Corps," clearly emphasizes the importance of every doctor in the United States, meeting the requirements above referred to, accepting a commission in the Medical Reserve Corps of the United States Army.

The struggle in which we are now engaged, and for which we are preparing to take such a prominent part, depends for its success as much upon the medical profession, as it does upon our combatant forces, and while we do not know that any such intention as herein suggested is in the mind of the Surgeon General, it would at least give him the necessary corps of medical officers, upon which to draw, and thus serve the best interests of our country, and the best interests of the medical officer serving.

NUISANCES.

The man who opens the door every minute to squirt tobacco juice.

The conversation monopolist.

The man who perpetrates stale jokes; and the man who tells smut.

The man who hawks, and spits, before talking.

The door slammer.

The man who leaves the door open.

The man who prods you in the ribs to hold your attention.

The man whose lungs exhale the fumes of whiskey.

The man who spits in the coal scuttle.

The man who squirts on the stove.

The end seat hog, and the man who is glued to a seat, while a white-headed woman stands.

The man who prates about himself, and who brags about his ancestors.

The loud mouthed, and the foul-mouthed man.

One who sees only the faults of others.

The man who habitually criticises others adversely.

The man who delights in telling of his immoral conduct.

The self important man.

The man with the bighead.

The persons who boast of their exploits.

The one who prevaricates; and lies; and you know it.

The person who grossly exaggerates, instead of talking the plain truth.

The doctor, who tells from house to house, how busy he is.

The doctor who boasts of miraculous cures, he never made.

The doctor who entertains, the laity with his professional business; and details exaggerations to newspaper reporters.

In fact, nuisances are in the majority.

GOOD RULES.

Hear as little as possible of that which is to the prejudice of others.

Believe no ill report, till you are compelled to.

Shun a tale bearer, as you would a falsifier of the truth.

The unkind criticism of others will be rebuked by your moderation and charity.

Don't forget an ill report may be changed when the other side is heard.

Use the coin of courtesy.

The errors of a moment may mean the sorrow of a life time.

Temptation is a file, which rasps off self-confidence.

Aim to do one thng well.

Don't be afraid to work with your hands. A cat in gloves, catches no mice.

Don't be extravagant: "Who dainties loves, shall beggars prove."

Rise early, and be industrious; "a sleeping fox catches no poultry."

"Plow deep, while sluggards sleep, and you'll have corn to sell and keep."

Never expect wealth from any other source except labor; "he who waits for dead man's shoes, will be a long time barefoot."

"He who runs after a shadow, has a wearisome race."

"Mark well this truth; a prying mind will lose far more than it can find."

PREVENTION.

Efforts for the prevention of disease, and measures to secure a more efficient, and intelligent treatment of the allotments of mankind, exercise the dominant energies of the profession, in this day.

Its labors to attain these, are a freewill offering to mankind, and when considered in relation to the functions, and rewards of medical skill, and sacrifices, they are the unique in humanitarian efforts. We should teach the world that they should so live, that they may keep well. It involves an educational preparation by the laity. Physicians should use no medical treatment, if it is not absolutely necessary. Much prescribing of drugs should be avoided. While medicines must be administered; yet there should be care exercised to see that palatable and eligible remedies are used.

The day for indiscriminate use of drugs is passing.

A HIT.

An invalid sent for a physician, and after detaining him for some time, detailing his symptoms, said, "Now doctor you have been humbugging me long enough with your worthless prescriptions, and I want you to strike at the cause of my trouble?" The doctor took his cane, demolished a decanter of whiskey, on the side board.

It's an old one of the man who wanted the doctor to treat him for nerve trouble. The prescription was handed to the patient, who asked the doctor to loan him the money to get it filled. The doctor requested to look at the prescription, whereupon he tore it up, remarking that the patient needed no nerve remedy.

AS OLD.

It is said a man is as old as his arteries. His arteries are as old as he is. If he is temperate, frugal, industrious, and eats plain, wholesome food, with plenty of bodily exercise, in the open air, he will not be troubled with hardened arteries. Men who are accustomed to manual labor, don't have hardened blood vessels. It is common with purely brain workers; high livers; and those whose habits are sedentary, excessive gustatory indulgences in rich food, and liquid stimulants, will surely result in hardened arteries; and a man may die long before he should. It would be largely his own fault.

PROVERBS.

"He becometh poor, that dealeth with a slack hand; but the hand of the dilligent maketh rich."

The rich man's wealth is his strong city, but the destruction of the poor, is their poverty."

"As vinegar to the teeth; and as smoke to the eyes; so is the sluggard to them that send him."

"A talebearer revealeth secrets; but he that is of a faithful mind, concealeth the matter."

HELPS.

Faith in the doctor's skill, is half the cure.

Dilute your compounds two-thirds, and give hourly doses, and faith will help the cure.

Pills are passing up, and not down!

Please the eye, and you will please the palate!

Offend the nostrils, and you will offend the taste!

The offending trinity, are onions, tobacco, and whiskey.

EDITORIAL NEWS ITEMS

Dr. C. S. Barker, formerly of Trenton, N. C., will move shortly to New Bern, N. C., to practice medicine. Dr. Parker will be connected with the staff of St. Luke's Hospital of the city of New Bern.

Dr. M. O. Burkholder of Norfolk, Va., died November 23rd. The doctor was a native of Harrisonburg, Va., but moved to Norfolk about fifteen years ago where he practiced medicine successfully.

Dr. John McCants and Miss Neva Dean were married at Murfreesboro, N. C., on November 22nd. Dr. McCants was formerly from South Carolina but is now stationed at the United States Naval Hospital, at Norfolk, Va.

Dr. Ernest S. Bulluck, of Wilmington, N. C., who has been a frequent contributor to this Journal and a friend to it in many ways, has been commissioned lieutenant in the army and is now entering the service.

Dr. George B. Kirkman and Miss Rosalind Taylor were married at Kinston, N. C., November 22nd. Dr. Kirkman is a native of Siler City, N. C., but for the last two years has lived in Ginston, N. C. His practice is limited to the eye, ear and throat.

Dr. H. C. Cody, of South Carolina, has just received his appointment from the state board of health as deputy state health officer and agent of the state board of health for the enforcement of the rules of the state board of health as regards sanitary conditions.

The Southern Gastro-Enterological Association.—Dr. J. C. Johnson, Atlanta, Ga., was elected president at its recent meeting in Memphis; Dr. J. T. Rogers, Savannah, Ga., vice-president, and reelected Dr. Marvin H. Smith, Jacksonville, Fla., secretary-treasurer.

Medical Society of South Carolina.—New officers: Dr. Robert S. Cathcart, of Charleston, president; Dr. John M. Green was elected vice-president; Dr. G. Frank Heidt, secretary; Dr. D. L. Maguire, treasurer, and Dr. F. G. Cain, librarian. The 128th annual meeting was held at Charleston, December 10th.

The Pacific Medical Journal, the oldest journal on the Pacific coast, which has juct completed its 60th volume, has been acquired by Dr. William J. Robinson and will be consolidated with The American Journal of Urology and Sexology. The combined journal will continue under the editorship of Dr. Robinson and will be published from 12 Mt. Morris Park, West, New York City.

Dr. J. T. Burrus, of High oPint, N. C., is now chief of the Surgical Service at the government Camp Beauregard, Alexandria, La.

We are not surprised at Dr. Burrus receiving this recognition of his skill as a surgeon. For a professional gentleman to give up the extensive practice that he did and go willingly to contribute to this patriotic cause is sufficient evidence of his patriotism and exhibits a manly feeling.

New Physicians for South Carolina.—Ten new physicians were recently examined at Columbia, S. C., by the State Board of Medical Examiners; for license to practice medicine. The following were successful candidates: Leon Banoy, Charleston; C. D. Boyette, Charleston; J. B. Cash, Chesnee; G. R. Caudle, Greenville; Ezekiah Hurst, Martin; R. L. Leak, Columbia; E. C. Ledbetter, Greenville; H. A. McElroy, Columbia; L. H. Smith, Columbia; W. W. White, Abbeville.

Dr. Hunter H. McGuire, president of the Winchester Memorial Hospital at Winchester, Va., has issued a statement in regard to the work done at the hospital during the past fiscal year.

The report is interesting. It indicates that the hospital is well equipped and well conducted. Eleven hundred patients received treatment in the hospital last year. They received $21,644.34, while their running expenses were $22,919.14, making a loss for the year of $1,274.80.

Dr. Bartlett J. Witherspoon of Charlotte, N. C., was recently elected president of the Mecklenburg Medical Society for the term of 1918. Other officers elected for next year are: Dr. C. M. Peeler, first vice president; Dr. P. M. King, second vice president; Dr. Otho Ross, secretary and treasurer.

Delegates to the annual state convention next May are: A. J. Crowell, J. P. Monroe and C. M. Strong; alternates: Drs. W. W. Pharr, W. O. Nisbet and Lester Rankin; Censor: Dr. James R. Alexander.

The Richmond Academy of Medicine and Surgery, on December 11, the following officers for the ensuing year were elected: President, Dr. Thomas W. Murrell; vice-presidents, Drs. W. S. Beazley, George C. Woodson and Ramon D. Garcin; secretary, Dr. Mark W. Peyser, reelected for the twenty-fifth time; assistant secretary, Dr. E. H. Terrell; treasurer, Dr. Howard Urbach; librarian, Dr. G. Paul LaRoque, and members elected to the judiciary committee, Drs. H. H. Levy, A. L. Gray, Beverley R. Tucker, McGuire Newton and John N. Upshur.

Dr. William T. Pate of Gibson, N. C., died at his home December 5th. Two months ago he was stricken with paralysis. Dr. Pate was a leading medical man in his section of the state. He graduated at the College of Physicians and Surgeons, Baltimore, in 1895. He was licensed to practice medicine in this state in 1895 and joined the State Medical Society in 1895. He was a member of his County Medical Society of the State Medical Society and of the Tri-State Medical Association of the Carolinas and Virginia. He was a popular physician and he always gave competent and good advice to the sick people who came under his care.

The Otterburn Springs Sanatorium at Amelia, Va., was destroyed by fire November 22nd, entailing a loss of $30,000. The loss was partly covered by insurance. The sanatorium was formerly the Otterburn Springs Hotel, and was converted into a sanatorium and opened as such last July. The following well known medical gentlemen were members of the staff: Consultant Staff, Surgical, Dr. Robt. C. Bryan and Dr. H. Stuart MacLean; Medical, Dr. Wm. H. Parker, Dr. C. A. Labenberg; Rectal Diseases, Dr. E. H. Terrell; Eye, Ear, Nose and Throat, Dr. C. M. Miller; Resident Physicians, Dr. Reid Putney, and E. S. Barr, M. D.

The Tri-State Medical Association of the Carolinas and Virginia. This association will meet in Spartanburg, S. C., the 3rd Wednesday in February, 1918. Dr. D. T. Tayloe of Washington, N. C., is president, Dr. Rolph E. Hughes of Laurens, S. C., is secretary. The indications are that this approaching meeting will be one of the best, if not the best, in the history of this fine society. Physicians and surgeons from the National Camps, Spartanburg, Greenville, Columbia, Charleston and Charlotte, N. C., will be there and contribute a lion's share of the many valuable and scientific papers that will be read. My acquaintance with this class of professional gentlemen, warrants the belief taht we have something fine in store for the scientific department for our next meeting in Spartanburg.

Brooks Hall, one of the best buildings connected with the Sanatorium, at Sanatorium, N. C., the state institution for tubercular cases was destroyed by fire on December 16th.

The patients were successfully, and without very much discomfort, removed to another building. The total loss was about $22,725.00. About $1,000 of the contents of the building was saved. The insurance amounted to $12,000.

This was one of the best buildings of the entire plant and was splendidly adapted for the purpose for which it was used. No doubt plans for another building to take the place of this one will be made in the early future.

Just at this time the accident was very unfortunate, partly on account of the very great number of applicants for admission in the institution and on account of the already crowded conditions of the other different buildings. This sanatorium is one of the best institutions of the state and possibly as useful as any it controls.

The Seaboard Medical Association of Virginia and North Carolina met at Norfolk, Va., November 21 and 22. The following officers were elected for the ensuing year, Dr. Ira M. Hardy, of Kinston, N. C., president.

Dr. W. L. Harris, of Norfolk, first vice-president; Dr. H. W. Carter, of Washington, N. C., second vice-president; Dr. P. St. L. Moncure, of Norfolk, third vice-president; Dr. George A. Caton, of New Bern, N. C., treasurer; Dr. Clarence oPrter Jones, of Newport News, secretary. The place for the next meeting of the association is Kinston, N. C. Reports are that Norfolk entertained this organization elaborately, and it was greatly enjoyed by the visiting physicians.

In the selection of Dr. Ira M. Hardy, for the next president, was a wise one. He is a hard and intelligent worker and thoroughly deserves all of the complimentts that the medical profession, certainly in that section of North Carolina and Virginia, can bestow upon him.

Dr. Clarence Porter Jones, continues to be the secretary of the association. He has held this position for several years, and is a popular and efficient secretary.

The Base Hospital, Camp Greene, Charlotte, N. C., was partly destroyed by fire on December 29th. The buildings for the use of the operating rooms, laboratories, etc., were destroyed. On account of the very cold weather and the difficulty in getting the proper water supply, rendered it quite difficult to control the fire for some time. The fire fighters were aided a great deal on account of the direction of the wind, otherwise the loss would have been very heavy. As it was, the nine hundred sick people in the hospital were but very slightly inconvenienced.

The loss from the fire was $75,000.00. This statement was given out by Major W. L. Sheep, who is in command of the hospital. The buildings destroyed were each thirty by fifty feet, one story high. The laboratory that was destroyed was one of the best equipped that the writer has ever seen. The great collection of hospital buildings cover an area of about sixty-five acres, and there is an average of one building to each acre. Some of the buildings are very large and unusually well equipped.

The cost of the Base Hospital has been estimated from $500,000.00 to $1,000,000.00. No official statement as to its cost has ever been issued.

Tri-State Medical Association of the Carolinas and Virginia.—The following communication has been received, and it gives us pleasure to reproduce it in The Charlotte Medical Journal:

The coming meeting of the Tri-State Medical Association of the Carolinas and Virginia, at Spartanburg, S. C., February 20-21, will in many respects be the most interesting in its history. The many discoveries incident to the great war will no doubt be discussed and thereby we will learn many things of tremendous value to us in our every day practice.

We expect to have some very distinguished visitors, and many things to interest us besides the scientific program.

If you are a member attend the Spartanburg meeting, if you are not a member attend the Spartanburg meeting and learn for yourself just what the doctors of the Carolinas and Virginia are doing. You will surely join the Tri-State Medical Association some time, why not send in your application today?

Please prepare a paper and let me have the title as soon as possible, certainly not later than February 10th.

Make your plans to attend this meeting, talk up the meeting, ask a friend to join this, one of the best Medical Societies in the world.

Yours with best wishes,

Secretary.

Dr. Robert S. Cathcart, of Charleston, S. C., has been appointed a member of the committee to take charge of the standardization of American hospitals. The first work this committee has to do is to consider in detail, a plan of hospital standardization, and for this purpose a general committee has been appointed from the country at large, consisting of surgeons, internists, laboratory men and hospital superintendents. The committee was called to meet in Washington, December 8 and 9.

The following is the personnel of the committee: The president, secretary and director of the American College of Surgeons.

Surgeons: D. Charles H. Mayo, Rochester, Minn.; B. Allen B. Kanavel, Chicago; D. A. Ochsner, Chicago; Dr. W. W. Pearson, Des Moines; Dr. Fred Bates Lund, Boston; Dr. J. Bentley Squier, New York; Dr. John M. Baldy, Philadelphia; Dr. Robert S. Cathcart, Charleston; Dr. Edward Jackson, Denver.

Internists and laboratory men: Dr. Victor C. Vaughan, Ann Arbor, Mich.; Dr. E. P. Lyon, iMnneapolis; Dr. L. B. Wilson, Rochester, Minn.; Dr. Francis C. Wood, New York; Dr. William H. Welch, Baltimore.

Hospital superintendents and others: Dr. Asa S. Bacon, Presbyterian Hospital, Chicago; Dr. John A. Hornsby, editor "Modern Hospital," Chicago; Dr. S. S. Coldwater, Mount Sinai, New York; Dr. Wniford H. Smith, Johns Hopkins, Baltimore; Father C. B. Moulinier, S. J., president of the Catholic Hospital Association, Milwaukee; Dr. A. B. Ancker, president Carnegie Foundation for the Advancement of Teaching, New York; representative of the surgeon general of the army, representative of the surgeon general of the navy, representative of the surgeon general of the United States Public Health Service.

BOOK NOTICES

Food for the Sick, for Physician, Nurse and Patient, by Soloman Strouse, M. D., Associate Attending Physician the Michael Reese hospital; Professor of Medicine at the Post-Graduate Medical School, Chicago, and Maude A. Perry, A. B., Dietitian at the Michael Reese Hospital, Chicago, Just Out, Containing 283 Diets and 124 Special Recipes 12 Mo. of 270 Pages, Cloth, $1.50 Net. W. B. Saunders Company, Philadelphia and London.

In the preparation of this volume the authors have supplemented their own experience by free use of the current literature in text-books and magazines. The volume is a small one, but beautifully bound, well indexed, etc., the formulae for several different kinds of food, such as ice cream, princess pudding, etc., are given.

The book is thoroughly practical from every standpoint and should be read by every nurse and every prospective nurse, and it would not be amiss for housekeepers and heads of families to read it.

Medical War Manual No. 2, Authorized by the Secretary of War and Under the Supervision of the Surgeon-General and the Council of National Defense. Notes for Army Medical Officers, by Lt. Col. T. H. Goodwin, R. A. M. C., Author of Notes for Medical Officers On Field Service in India and Field Service Notes for R. A. M. C., With an Introductory Note by Surgeon-General William C. Gorgas, U. S. A., Illustrated. Price $1.00, Lea & Febiger, Philadelphia and New York, 1917.

The first part of this medical war manual was looked over and commented on in this Journal some months ago. It is a good little book for the purpose in which it has been prepared.

These "Notes for Army Medical Officers" are elaborated from a series of lectures given by Col. T. H. Goodwin, before the classes at the Army Medical School, Washington, D. C.

They are based upon a long practical experience of the distinguished author at the front, and include much information which will be of the greatest value for members of our Medical Service as they go abroad on active duty with troops in France. Many of the perplexing questions which have presented themselves to our officers are here answered in a most clear and interesting manner.

Medical officers of our army are under great obligations to Colonel T. H. Goodwin for the greater efficiency which this book makes more readily possible. Surgeon-General W. C. Gorgas recommends the book.

Diseases of the Chest and the Principles of Physical Diagnosis, by George W. Norris, M. D., Assistant Professor of Medicine in the University of Pennsylvania, and Henry R. M. Landis, M. D., Assistant Professor of Medicine in the University of Pennsylvania, With a Chapter on the Electrocardiograph in Heart Disease, by Edward B. Krumbharr, Ph. D., M. D., Assistant Professor of Research Medicine in the University of Pennsylvania. Octavo Volume of 782 Pages with 413 Illustrations. Philadelphia and London; W. B. Saunders Company, 1917. Cloth, $7.00 Net. Half Morocco, $8.50 net.

This is one of the best books of the kind that the reviewer has had the pleasure of examiing in a long time. It is a large volume of 782 pages with 413 illustrations. These illustrations are very proper and very accurate and illustrates the text thoroughly.

The writers have undertaken to write a practical book on physical diagnosis of the heart and lungs in health and disease. They have omitted everything not of practical diagnostic use. They have condensed methods of secondary importance.

More than is custom has been written on the subject of diagnostic accoustics, because we believe that only through the comprehension of the laws of sound production and transmission can the results of percussion and auscultation be intelligently interpreted.

They have endeavored to teach as much as possible by means of illustrations. This was a valuable idea. Many of these illustrations are photographs of frozen sections from the cadaver, previously hardened in formaline, so that the anatomic relations of the tissues remain as during life. They find these specimens invaluable in our own teaching; and the book has been written in the hope that the photographic reproductions may be useful. The book is in every way worthy of the authors and publishers.

Infant Mortality, by Hugh T. Ashby, B. A., M. D., B. C. (Camb), M. R. C. P. (London), Visiting Physician to the Manchester Children's Hospital, Pendlebury Visiting Physician for Children to the Manchester Board of Guardians, Hon. Physician to the Salford Royal Hospital and to the Salford Schools for Mothers. Price $1.50, Cambridge; at the University Press, 1915.

The object of this book is to try to awaken more interest in the prevention of infant mortality, not only among the public, but also among those bodies entrusted with the safe upbringing of the future generation.

The great war of 1914-15 makes the subject of paramount importance at the present time; it is necessary for us as a nation to see that we have as many heathen children as possible.

The birth rate of this country, like that of others, has been steadily diminishing for many years, and it is therefore all the more desirable that we should give every infant as good a start in life as possible; it is on our children that the future of the nation depends in its competition with others, and for its own internal well-being and efficiency.

The book has several valuable statistical tables and several illustrations. It contains 229 pages, which makes a very nice little volume.

A Practical Dietary Computer, by Amy Elizabeth Pope, Author of "Quiz Book of Nursing," "Anatomy and Physiology for Nurses," "A Medical Dictionary for Nurses," "Physics and Chemistry for Nurses," "Essentials of Dietetics," and, with Anna Maxwell, of "Practical Nursing." Price $1.25. G. P. Putnam's Sons, New York and London. The Knickerbocker Press, 1917.

It seems that there exists a very plausible reason or necessity for such a book as this. The nurse, with these tables before her can accurately estimate the food value of foods used for the sick. There should be a special demand from hospitals and schools of household economics for such a valuable book as this. The writer in dealing with food products for the sick is possibly dealing with the most important thing in the field of nursing.

It gives me pleasure to congratulate the author for giving the nursing world such a valuable and practical book. It contains 170 pages and is very attractively gotten up.

Physical Diagnosis, by W. D. Rose, M. D., Lecturer on Physical Diagnosis and Associate Professor of Medicine in the Medical Department of the University of Arkansas. Two Hundred Ninety-Four Illustrations, St. Louis, C. V. Mosby Co., 1917.

This volume has been made especially valuable on account of its 194 illustrations. They are exceptionally fine and illustrates the subject very well indeed. This is a medium size volume of 499 pages. It is printed on fine paper that makes a good appearance.

Dr. Rose, in preparing this volume had in mind the medical student and the busy practitioner, and it has been his purpose to incorporate in a brief work the principles of physical diagnosis, together with the physical findings in the commoner diseases of the respiratory and circulatory systems. In this connection anatomy and pathology have been considered from the clinical standpoint, emphasis being laid upon these subjects as they influence the physical manifestations of disease of the thorax and abdomen.

In addition to the physical examination of the thoratic and abdominal viscera, it has seemed proper and practical to include in the work the principal diagnostic signs referable to the head, neck, and limbs, together with a minimum examination of the nervous system. The price of the book is $4.00.

Surgery and Diseases of the Mouth and Jaws. A Practical Treatise on the Surgery and Diseases of the Mouth and Allied Structures, by Vilray Papin Blair, A. M., M. D., F. A. C. S., Professor of Oral Surgery in the Washington University Dental School, and Associate in Surgery in the Washington University Medical School. Third Edition, Revised so as to Incorporate the Latest War Data Concerning Gunshot Injuries of the Face and Jaws. Compiled by the Section of Surgery of the Head, Subsection of Plastic and Oral Surgery, Office of the Surgeon-General of the Army, Washington, D. C., with 460 Illustrations, St. Louis, C. V. Mosby Company, 1917.

This is one of the best books that we have ever had the pleasure of examining. Its author, Dr. Blair, is nationally and internationally known in the medical and surgical world. This volume contains 733 pages, printed on thick, heavy, enameled paper and it has 460 illustrations which have been very intelligently and appropriately selected. No subject on surgery has received greater emphasis in this war than the necessity of correlating the skill and the knowledge of the general and the dental surgeons in the treatment of the combined injuries of the face and the jaw bones.

The present revision is mostly confined to the parts related to injury and sepsis and their treatment, and was done by the Section of Surgery of the Head, Subsection of Plastic and Oral Surgery, as an expeditious method of giving, in a correlated form, the sum of the observations of the many workers abroad, to whose reports and recommendations, published, written and verbal, this section had access.

These were put forth in this form because, on the one hand, time did not permit of a full exposition of the subject in a special manual; while on the other, it would be of less utility and somewhat awkward to attempt to present these observations while disregarding the well established principles upon which they are based.

Dr. Blair has been collecting material for years, for a general revision of this most valuable book, and certain matters referring to the repairing of defects have been included in this revision, to which have been added some recent observations on cancers of the mouth. The price of the book is $6.00. The volume is not only of special value to the surgeon, but also to the dentist ,and we find that it is interesting and instructive to the general practitioner.

An Intermediate Textbook of Physiological Chemistry, with Experiments by C. J. V. Pettibone, Ph. D., Assistant Professor of Physiological Chemistry, Medical School, University of Minnesota, Minneapolis. St. Louis, C. V. Mosby Company, 1917. Price, $2.50.

Dr. Pettibone's aim in writing this book was to prepare an intermediate text which would cover the general field of physiological chemistry in such a way as to give students a familiarity with compounds important from a biochemical viewpoint, and to acquaint them with the fundamental processes which go in the animal body. He has undertaken to avoid confusing the beginner with lengthy discussions of debated points, but to set forth as clearly as possible the present status of our knowledge. The material is so chosen that the book may be used for intermediate classes, or for advanced work if supplemented by lectures.

The volume has a few illustrations, all that are necessary. The volume contains 328 pages, with the index. The volume is small, cloth bound and an attractive looking book.

Talks on Obstetrics, by Rae Thornton La Vake, M. D., Instructor in Obstetrics and Gynecology, University of Minnesota; Obstetrician-in-Charge of the Out-Patient Obstetric Department of the University of Minnesota; Associate Attending Obstetrician and Gynecologist to the Minneapolis City Hospital; Obstetrician-in-Charge of the Out-Patient Obstetric Department of the Wells Memorial Dispensary; Obstetrician to the Swedish and Abbott Hospitals, Minneapolis; One Time Assistant Resident Obsterician to the Sloane Hospital for Women in New York. St. Louis, C. V. Mosby Company, 1917.

Dr. La Vake has prepared this book for undergraduate students and to practitioners. It is intended as a mere supplement to the textbooks and is in no way a substitute for them or comparable to them.

Dr. La Vake has incorporated many valuable points in this small volume of 157 pages. We have looked over the volume with much interest and profit. The price of the book is $1.00.

Miscellaneous.

An Analysis of Cases of Tetanus Treated in Home Military Hospitals.—Bruce, in the London Lancet, reminds us that in his two previous analyses it was stated "the main conclusion to be drawn from a study of these cases of tetanus treated therapeutically by antitetanic serum is that it seems highly probable that the serum has little or no effect on the course of the disease." This, of course, must be understood to be merely an opinion formed from the study of these particular figures. It is not the expression of an opinion as to the usefulness or not antitetanic serum as a therapeutic agent. It merely means that no evidence can be gained from these reports in favor of the curative power of this antitoxin. This is not to be wondered at. The number of cases analyzed is small. There are only two controls. The greatest variety in mode of treatment existed. The men were suffering from wounds, septic poisoning, and other diseases in addition to tetanus. The cause of death is credited to tetanus, but in many cases wrongly so. For example, among the 73 deaths in the 200 cases under consideration, 14 at least were primarily due to gas gangrene, septicemia, heart failure, or pneumonia. Under these circumstances it is not surprising that no conclusive evidence can be gained. The difficulty of arrivingg at truth in human therapeutics is notorious. It would certainly be very satisfactory, and ample reward for work expended, if the real value of antitetanic serum in the treatment of tetanus could be definitely laid down.

Millions of cubic centimeters of antitetanic serum have been used since the war began. If it could be proved to be of no use it would mean a great lessening of pain and inconvenience to the men suffering from tetanus, and economy to the State.

If it were possible and legitimate to stop all treatment of tetanus in the army by antitetanic serum for six months or a year some valuable information might doubtless be obtained. But this is not practicable, since the consensus of opinion of medical officers in England is decidedly in favor of this specific treatment. The only thing to do, then, is to redouble the efforts to make the therapeutic application of the surum as thorough as possible. This can best be done, according to the Tetanus Committee, by the recognition of early symptoms and the thorough application of the antitoxin without any loss of time by the intrathecal route.

It must be clearly understood that these remarks only refer to the therapeutic or curative use of antitoxin. The enormous value of antitetanic serum as a prophylactic is firmly established beyond any shadow of doubt. It is to be sincerely hoped that there will be no slackening in its use as a prophylactic, and the medical officers in charge of wounded in home hospitals will give the recommendations of the Tetanus Committee in regard to the repetition of these prophylactic doses a thorough trial.

1. Carbolic Acid Injections.—During August, September ,and October, 1916, there were only two cases treated with this drug; one recovered, one died. Case 410 is reported to have had 10 minims of a 2-per cent. solution, but how often or how long is not stated. Case 444, 2 c. c. of a 4 per cent. solution every two hours for three days. Died.

2. Magnesium Sulphate.—Only one case was treated. Case 485. Intrathecal injections of 40 minims of 25 per cent. solution daily under nitrous oxide anesthesia. Died.

1. In the 200 cases of tetanus under review the mortality was 36.5 per cent.

2. The greatest number of cases occurred between the ninth and fourteenth days.

3. Only three cases are reported to have received secondary prophylactic injections of antitetanic serum in home hospitals.

4. In regard to the therapeutic effects of the serum the evidence as collected from the August, September, and October, 1916, reports is not conclusive.

5. The summary given in the last analysis in regard to treatment may be repeated.

(a) Place in a quiet, darkened room under the care of a capable and sympathetic nurse. "Rest, sleep, and food" are looked upon as the first essentials of treatment.

(b) If thorough surgical treatment is carried out on wounds from beginning so as not to allow the presence of necrotic tissues or foreign bodies, the number of cases of tetanus should sensibly diminish, if not altogether disappear. But if a case does occur, then the wound should not be actively interfered with until the tetanic symptoms have subsided.

(c) The intrathecal injection of large doses of antitoxin, of high potency if available, should be begun at once and supplemented by intramuscular and subcutaneous injections.

(d) In addition, if necessary, the patient should receive sedatives, of which morphia in ¼-grain doses and administered every four hours is perhaps the most suitable. Chloral, chloretone, and other sedatives may also be given by the mouth or rectum.

Commoner Abnormalities of the Heart in Healthy People.—The deviations of the heart from the ordinary state which are found in the course of examination of supposedly normal individuals who present themselves for life insurance, for entry into the Navy or Army, to join benefit societies, etc., form at the present time a matter of special interest, and are treated by Thayer in an exhaustive communication (Med. Rec.). The hypertrophy of adolscence with cardiac apex in the nipple line, strong impulse, and first sound loud and booming depends, he says, in many cases, on a simple disproportion between the size of the heart and the size of the chest, the heart having reached its full growth before the rest of the frame. Such a condition he finds in no sense alarming if the boy has about reached puberty, unless the heart is really larger than it should be in the adult. The movability of the normal heart is a factor which the examiner sometimes forgets when he examines the patient in an unusual position. When the patient turns from side to side the displacement of the normal heart sometimes amounts to a hand's-breadth. Reduplication of the second sound during inspiration is dependent on delay in the closure of the pulmonary valve segments, and is present in a good many normal individuals; if it is present throughout the respiratory cycle, or associated with other signs of cardiac disease, it may perhaps be regarded as
In forty-eight cases the cranial defect
confirmatory evidence of muscular weakness. A third sound, or protodiastolic gallop, is audible in a large proportion of young people when they are examined

in the recumbent or left lateral position; if there is no other sign of heart disease this may be regarded as a perfectly normal phenomenon. In some young people a presystolic gallop may be heard, and this also, if unassociated with other evidence of disease, is of no pathological significance. When these sounds are of considerable intensity the protodiastolic one is commonly associated with ventricular dilatation and the presystolic with hypertrophy and hypertension. Systolic murmurs in the pulmonary area, which are increased or produced during expiration and lessen during inspiration, are entirely devoid of pathological significance. Thayer and MacCallum, in the course of experiments on dogs, found that the slightest pressure on the conus produced a murmur, and Thayer therefore concludes that this systolic murmur at the base of the heart in young individuals appears during expiration owing to pressure against the ribs, and disappears on inspiration owing to the interposition of a soft cushion of lung. Similar murmurs are very commonly heard at the apex in young persons when they are examined on the back or left side, and when such murmurs disappear in the erect posture and are unassociated with other evidences of cardiac disease they, too, are of no pathological significance. Cardio-respiratory murmurs are very common, and notably a loud systolic inspiratory murmur heard in the back after exercise; they are not intracardial in origin, and they indicate no abnormality. Respiratory arrhythmia, consisting of a quickening of the pulse-rate with inspiration and a slowing off during expiration, is very common in children, in adolescents and in the neurasthenic; but if the sequence of auricular and ventricular contractions is shown by the polygraph or electrocardiograph to be normal, it is of absolutely no pathological importance. A similar criterion applies to sinus arrhythmias, which are sometimes found to be accentuated by respiration in a similar manner. Irregularity, due to the occurrence of extrasystoles, is a condition which of itself gives no evidence as to the state of the heart muscle or the limits of the cardiac power; they are very often met in persons who are under serious nervous or mental strain, e. g. clergymen and students; they are often related to certain toxic influences, e. g. tobacco and coffee, or even follow upon an unduly large meal; in such cases their occurrence may persist through many years and be simply an evidence of increased irritability in the heart muscle. If there be no cardiac hypertrophy nor arterial sclerosis, and if the heart responds normally to exercise, with temporary disappearance of the extrasystoles, one need not assume the existence of any serious cardiac defect.—Edinburgh Medical Journal.

Methods of Repairing Defects of the Skull.—Villandre (La Press Med.) has operated on 106 cases in which there has been a defect in the skull resulting either from injury or operation. The indications for operating in such cases are as follows: (1) When the gap in the bone is extensive in the frontal, parietal, parieto-temporal, or parieto-occipital regions it may be advisable to adopt measures for protecting the surface of the brain; (2) when the scar over the gap is thin and liable to ulcerate or give way it should be replaced by flaps of healthy scalp or of skin from the frontal region; (3) the presence of a gap may cause the patient inconvenience when the intracranial pressure is raised by a sudden effort, and in such cases it is advisable to provide an unyielding surface; (4) occasionally operation is indicated in cases of severe headache, which resists other treatment, even when the opening in the skull is small.

The author has employed four different methods for performing cranioplasty. In four cases, where the gap was small in extent, a paste, composed of phosphate and carbonate of lime mixed with olive oil, was employed, but the results were not encouraging, as in two of the cases the paste was not tolerated by the tissues and was discharged.

In twenty-two cases, where the gap was not greater than 3 to 4 cm. in diameter, fragments of bone, which were sterilised first in the autoclave at 130 deg., were employed. These were obtained from various sources, and included portions of human skull and ribs and portions of the skull, scapula, or iliac bone of the sheep. After suitable shaping, the fragment of bone is fixed in the gap by a catgut suture inserted through the pericranium. The results of this method were not entirely satisfactory. In four of the cases the implanted bone acted as a foreign body, and in the remaining eighteen cases the patients complained of severe headache for a week or two or sometimes longer after the operation.

Autoplastic grafts of costal cartilage or of bone and its periosteum from the tibia gave almost uniformly successful results. The bone graft from the tibia was employed successfully in every case in a series of thirty-two cases, and with this material there was a notable absence of after-headache, indicating the better tolerance of the living graft by the tissues as contrasted with sterilised bone. A considerable margin of free periosteum should be applied next the dura mater. The ends of the graft should be pared down so that they may rest without projecting on the pericranium at the edge of the gap. The subsequent repair of the gap is always firmer after transplantation of bone than when cartilage has been used. In very large defects of the skull it may be advantageous to combine both forms of graft. The author believes that a certain amount of new bone is subsequently formed from the transplanted bone and periosteum.

was filled by portions of costal cartilage, as recommended first by Morestin. The operation was successful in all but two of the cases, and the grafts, with few exceptions, united firmly in position. When the gap is of any size, several grafts of cartilage will be necessary. These are placed between the dura and the scalp, and there may be some difficulty in preventing them from shifting their position. The author recommends for fixing the grafts the insertion of several catgut strands through the edge of the pericranium and crossing the defect in the skull so as to form a sort of meshwork around or over the grafts. Large grafts are not advisable, as there is a tendency for the surface to curve inwards and to press upon the cortex.

There was no operative mortality in the series of 106 cases.—Edinburgh Medical Journal.

The Value of Feeding During Operation as a Preventive of Surgical Shock.— Brown (British Medical Journal) says that whatever theory of the causation of shock is accepted, it is quite certain that loss of blood and insufficient feeding are of great importance as predisposing agents. Operations on the stomach, such as gastroenterostomy and partial gastrectomy, are often accompanied by severe, and sometimes fatal, shock.

The operation is usually performed either for stricture of the pylorus and consequent gastric dilatation resulting from cicatrization of an ulcer in the pyloric region, or for malignant disease; in another class of case it is performed for severe hemorrhage from a gastric or duodenal ulcer. In the first class the patient's nutrition is low. Owing to the difficulty in the passage of food through the pylorus and the vomiting of a large part of the food ingested, a condition of starvation is induced, and when malignant disease is present, hemorrhages and cachexia add to the debility. In the second class the patient is usually profoundly anemic, and may have undergone a preliminary course of starvation only very partially alleviated by rectal feeding. It is not surprising that in such cases operations on the stomach produce an extreme degree of shock.

To combat this, it has been his practice during the past ten years to feed the patient during the operation. The operation is proceeded with in the usual way until the suturing with catgut of the mucous membrane and muscular wall of the stomach and jejunum is nearly completed—that is, to within the last one-fourth of it. A soft catheter with rubber tube and funnel attached is then introduced into the jejunum and passed on until the end of the catheter is in a coil of intestine well within the abdomen, the opening through which it is passed. being held firmly with the finger and thumb to prevent any leakage of fluid. The intestinal and stomach clamps have been removed. A pint of peptonized milk, to which a beaten-up egg and an ounce of brandy have been added, is poured slowly through the funnel into the intestine; the funnel is held at a distance of 8 to 10 inches above the abdomen so that no undue distention of the intestine can take place. The catheter is then withdrawn and the operation completed in the usual manner.

Since adopting this procedure he has never seen serious shock follow an operation of this character, and the patient usually leaves the table with a better pulse than he had at the commencement of the operation.

A few weeks ago he operated upon a man of fifty-seven who was wasted and anemic. He had malignant disease involving the circumference of the stomach about five inches from the pylorus. He removed about two-thirds of the stomach, uniting the cardiac end to the jejunum. The operation was long, lasting for two hours, or a little more.

The blood-pressure, which was 140 mm. before the operation ,fell to 90 mm. soon after its commencement, and was below 90 mm. when feeding was commenced. It had risen to 120 mm. half an hour later, when the operation was completed. He had no symptoms of shock afterward, and made an uninterrupted recovery.

Shortly afterward he operated upon a similar case, in which the carcinoma involved a still larger area of the stomach, and the resection was very extensive. The patient suffered somewhat severely from shock at the time of operation, but was sitting up in bed taking food well in the course of a few days. After an operation Brown generally starts regular feeding within twelve hours, giving two ounces of peptonized milk hourly to commence with.

In performing gastrostomy for stricture of the esophagus of the cardiac end of the stomach upon a patient who is in a cachectic and semistarved condition, Brown always feeds during the operation, passing a catheter through the gastrostomy opening into the duodenum, and injects a pint of prepared food and continues feeding regularly at four-hourly intervals after the operation.

In addition to its value in preventing the development of shock, this procedure tends to promote the healing of the stomach and abdominal wounds. It is obvious that tissue cells cannot divide and repair take place unless the cells are provided with food, and speedy union is of great importance in the success of these operations.

The Possible Functions of the Cerebro-Spinal Fluid.—In his presidential address to the Neurological Section of the Royal Society of Medicine in October 1916 Professor Halliburton makes a very useful contribution to this important subject (Brain, October, 1916, p. 213). He first states what is at present known of its character and composition. It is an ideal saline solution, containing practically all the substances present in Ringer's and Locke's artificially prepared fluids for the maintenance of animal life outside the body. It is secreted by the cells of the choroid plexuses at a pressure which is not the result of arterial pressure, though it may follow changes in that pressure. It is a true glandular secretion. Its flow can be stimulated by excess of carbon dioxide in the blood, by drugs which interfere with respiration, by volatile anaesthetics which may act through respiration, and by an extract of the choroid or of the brain. In the last case the active principle is probably some product of nerve metabolism. The secretion is absorbed by way of the blood stream and not by the lymph channels of the nerves. The diffusion is extremely slow in the lower spinal region, which renders the value of medication through lumbar puncture of doubtful value. It is most rapid in the subcerebellar district. The mode of its entrance into the blood stream is probably into the venous sinuses by the microscopic archnoidal villi. It may also occur through the thin walls o fthe blood vessels within the central nervous system. Diffusion from the blood to the fluid hardly ever occurs.

He then passes on to a consideration of the meaning and functions of the fluid. It certainly serves a mechanical purpose, as a support to nervous structures. In this respect, however, it differs from ordinary lymph, which is wholly dependent on blood pressure, and therefore variable, and it is quite probable the nervous system may require protection from these variations. It is not the same as lymph in its composition, but there seems little reason to doubt that in the nervous system it plays the same part as lymph does in other organs. It is the channel by which nutrition is conveyed to living cells and by which products of metabolism are removed from these cells though the latter has not been directly proved. In these processes not only the cells of the choroid plexuses take part, but all the cells lining the spaces which contain the fluid. In another respect it differs from ordinary lymphatic flow. In the latter there is a free flow in both directions, in the former the fluid appears to be impenetrable from the blood except for oxygen. The nutritive materials of the fluid are secreted by the cells and not simply exuded from the blood. If drugs are to influence such diseases as tabes and general paralysis they must be of such a nature that they will pass through the defensive cellular barrier, and so reach the nervous structures attacked by the disease. The small amount of protein in the cerebro-spinal fluid, and the presence of sugar, seem to point to a means of gauging the requirements of the nervous system for suitable materials for its functional activity. These are definitely known to be much less than are necessary for some other tissues, for example, muscle. He suggests that the nervous system, considered from the developmental aspect, is rather a modification of a respiratory than of a digestive apparatus. The sensitiveness of the nervous system to carbonic acid, and its presence in high percentage in the cerebro-spinal fluid, seem to point to the former and not the latter. The function of the cilia of the ependymal epithelium is the last speculated upon. By analogy with some lower animals it is surmised to be in the direction towards the point where absorption of the fluid takes place most rapidly—that is, in the forward regions at the base of the brain.—Edinburgh Medical Journal.

Intravenous Injection of Sodium Bicarbonate in Delayed Chloroform Poisoning.—Farquhar, in The British Medical Journal, says that he removed a gangrenous appendix from a soldier who had been gassed. The anesthetist began with ether, as chloroform is avoided at the Darlington Hospital in acute appendicitis, and also in cases in which there has been starvation or vomiting for some days before operation. It was soon found, however, that ether was dangerous in this case, causing extreme cyanosis and profuse bronchial secretion, owing probably to the bronchitis that still remained from the "gassing," and it was decided to continue with chloroform, which the patient took well.

Next day the temperature had fallen, the pulse was good, there had been little or no vomiting, the abdominal condition was quite satisfactory, and the patient seemed much better and was reading the newspaper on Farquhar's arrival. He had been getting sodium bicarbonate by the mouth and was taking fluids well.

Two days after the operation the house surgeon reported that the patient was very sleepy, and was beginning to get jaundiced. Calomel and enemata were given, but the drowsiness increased. On the third day he was very yellow and in a state of coma, from which he could not be roused; it was accompanied by restless movements of the head and body when attempts were made to examine the pupils or to pass the catheter. Urine and feces were passed involuntarily, and no specimen was procured to be tested for acetone and diacetic acid. To all the surgeons who saw him the diagnosis seemed obvious—secondary chloroform poisoning—and the outlook hopeless. His relatives had come from another town to see him, but he could not be roused. Hoping for a temporary rally, Farquhar decided to inject intravenously a solution of sodium bicarbonate, as recommended by Langdon Brown in diabetic coma.

The incision was unnoticed by the patient, and two pints of sterile water containing five drachms in all of sodium bicarbonate were injected into the median basilic vein. Before leaving the table the patient drawled out the words "Oh, I say," again and again, but still could not be roused, and continued to pass urine and feces unconsciously until the next day, when a slight return to consciousness was noticed, and he tried to answer questions, but at first with no sign of understanding them. A pint of sodium bicarbonate solution was given subcutaneously every six hours and also occasionally by the rectum.

Two days after the intravenous injection the return to consciousness became more marked and he began to talk a little, but seemed childish. On the third day the mental condition was practically normal. The appendix wound healed by first intention, but convalescence was delayed somewhat by an abscess in the pectoral region caused by the repeated subcutaneous injections, when the patient was restless, making it difficult to avoid sepsis. Otherwise recovery was uneventful and complete.

The interest of the case lies in the fact that recovery took place even after the onset of coma with involuntary passage of urine and feces. In most cases of delayed chloroform poisoning (of which Farquhar has, unfortunately, seen several) the pulse is rapid and weak, the patient is breathless before the onset of coma, and death is almost certain when this stage is reached. Whether intravenous injection of sodium bicarbonate solution can avert a fatal ending in any of these is doubtful, as in the case recorded above the pulse was never weak and running, but the treatment is, at any rate, worth a trial.

Trench Fever and Its Allies.—Colonel Sir W. P. Herringham says that in the first winter of the war there were many cases of stiffness and pain in various parts, especially in the muscles of the back and shoulders, with some fever, and there were also a few cases which were thought to be influenza, but in the spring of 1915 our attention was drawn to the frequency of a form of fever which struck every one as novel. The men were often seized suddenly, perhaps when performing a duty, with a vertigo or faintness so severe as to drop them in their tracks. A severe headache, especially at the back of the eyes, and a pain in the back began at once. Occasionally there was pain in the left hypochondrium. When the men reached the clearing station they complained of much pain in the legs, especially down the shins. Many could not bear the pressure of the bed clothes. In some the pain was rather in the muscles of the thigh, and in a few it was felt in the calf. Along with these symptoms the tongue was furred, the appetite bad, nausea was not infrequent, and the bowels were constipated. There was no cough, and the lungs were unaffected. The pulse was from 70 to 80, and the heart was natural. The spleen was not enlarged, and there was no albuminuria. The temperature rose quickly, reaching 103 deg. F. or more on the second day. Occosionally the temperature rose to 105 deg. F. and was accompanied by stupor. It fell on the third and fourth to normal, and then in many cases rose again on the fifth or sixth day, to fall again on the ninth or tenth. This saddle-backed curve resembled that of the phlebotomus fever of the Mediterranean, and the symptoms were not dissimilar, though milder, but there was no phlebotomus in this country.

As further cases were observed, it was discovered that the relapse might take place at different intervals, even after ten days of a normal temperature, but that for each patient the cycle was regular. Thus in one patient the cycle might be seven days, in another ten, and in another even thirteen days. The periods of normal temperature lasted five, eight, and eleven days respectively, and were interrupted by a sudden fever, which might rise to 104 deg. F. and as quickly disappear. As the disease continued the fever rose each time to a gradually lower level, and the intervals might become longer.

In a large number of cases there was only one bout of fever. Many had only one relapse, but if there was more than one there were frequently many, and such a patient might continue ill for many weeks.

Such charts as these, with a sharp and sudden rise, separated by regular and afebrile periods, were strongly suggestive of the life-cycle of some blood parasite, and every method was followed which gave hope of its discovery. Up to the present no such body has been found, but it has been shown that the fever can be communicated by the blood from a patient if injected into a healthy man, and, further, that the virus is connected with the red blood cells and not with the serum. It has been a common opinion that whatever the virus may be it is conveyed by the louse, and there are a few facts to support this.

No case proved fatal, and the great majority made a speedy recovery, but some were left with irregularity of the heart, which persisted for a long time. Cases of recurrence after intervals of good health were not unknown; it was evident that one attack did not produce immunity.

Many drugs—including the salicylic acid compounds, and quinin by the mouth, and salvarsan, and antimony by injections—were tried. None had any effect upon the course of the fever. In a few cases aspirin, and in more morphin, relieved the pain temporarily.

Along with this relapsing form, which was called trench fever, there were others which showed no relapse, though the symptoms were the same. Some of them had a hog-backed curve, the highest points lying towards the middle of the curve, which fell to normal about the tenth day. Others had a low pyrexia, never rising much above 100 deg. F., but lasting a fortnight or three weeks. In the summer of 1916 a number of cases of short fever were seen in which the spleen was enlarged. These cases were occasionally observed at other times. They were probably a special form.

Some thought that they could distinguish a special type which they called shin fever, but this could not, on wider investigation, be established. It should be added that pain in the shins was not peculiar to any fever. It was seen in typical cases of enteric.

Some bacteriologists found various infections in the blood of these cases, but their results were not confirmed.

The chief diseases from which these fevers had to be distinguished were one of the enteric fevers and influenza. It was not until repeated examinations, extending over some hundreds of cases, had been made that we felt justified in excluding the former. Influenza is so protean a disorder that its exclusion was still more difficult. There were in these fevers, however, no catarrhal symptoms, the B. influenzae was never found in the blood, and the cases occurred only at the front or among the personnel of hospitals where the cases were treated. It was not a general epidemic as influenza usually is. —Brit. Med Jour.

Acute Glaucoma or Iritis?—The London Practitioner for August, reminds us that when colored halos around artificial lights are complained of, one is very suspicious of increased intraocular tension. They result from the haze of the cornea, and the same play of colors is seen if spectacles seem to become steamed. Another prodromal symptom that sufferers sometimes observe is that a room, which is really light, becomes foggy and dark for varying periods of time. These two symptoms occurring together in an elderly patient are pathognomonic especially if the friends have noted on such occasions the eye is red and painful. Retching and sickness commonly result from the severe pain in the eye, but never with uncomplicated iritis.

To sum up, an association together of several of the following indicates an attack of glaucoma:

(a) History of sudden onset, especially if in the evening or after the patient has retired to bed; colored halos and foggy rooms.

(b) Severe darting pain in the eye and supraorbital region, particularly if accompanied by sickness.

(c) Ciliary injection and a steamy cornea.

(d) Shallow anterior chamber.

(e) Sluggish, partly dilated, ovoid pupil.

(f) Rapid loss of sight.

(g) Raised tension.

(h) Glaucomatous cupping of the optic disc.

In the first instance, Wallis tries to relieve the attack by means of myotics; he adopts the following routine in practically every case of acute glaucoma, and in the order given:

1. The patient is put into a warm bed with hot bottles, ad a full dose of calomel is administered.

2. A drop of an oily solution of eserine and cocaine is instilled into the affected eye every ten minutes for an hour. It is also important to see that the other pupil is made to contract, because the shock of the attack, or of the operation later, may excite similar trouble in the sound eye. The drops are composed of eserine base and cocaine base ½ per cent. of each in olive oil. The advantage of using cocaine is that, apart from its its alleviating pain in some measure, it counteracts the congestive effect of the eserine.

3. Three leeches are applied to the temple on the affected side as near to the canthus as possible. These creatures being now practically unobtainable, wet cupping is equally good and far cleaner.

4. Vigorous application of heat through the closed eyelids either by hot-bathing or by fomentations.

5. Sodium salicylate 10 or 15 grains and morphine ¼ grain hypodermically both relieve pain and cause diaphoresis.

This treatment is carried out for an hour, by which time, if it is going to prove efficacious, we shall find the pain assuaged, the pupil completely contracted, and the vision improved. If, however, the attack has not passed off entirely, it is not only useless to delay operative interference any longer, but highly dangerous. The whole point in the treatment by myotics is to relieve the condition so that an operation may be done as soon as the eye becomes quiescent, for thus a general anesthetic is avoided, and the operation is made easier and safer. The danger of delay, if the tension does not come down to the normal, lies in the fact that when vision has been greatly lowered it will not be fully restored unless the glaucoma subsides within 12 hours. The sooner operation is performed in unrelieved cases the speedier the recovery and the better the end-result. Acute glaucoma, like strangulated hernia, must be dealt with at any hour of the day or night.

Ligature of Common Carotid Artery.—Shaw, in The London Lancet, states that in those cases of injury to the large vessels of the neck which escape death upon the field from primary hemorrhage, operative treatment is seldom called for before the patient reaches a base hospital. The conditions usually presented at a casualty clearing station are either a small deep traumatic aneurism or, more commonly, an arteriovenous aneurism of variable size, while in a few rare cases of severe reactionary or secondary hemorrhage ligation may be indicated.

An aneurism increasing in size or dangerously superficial in the neighborhood of a wound may necessitate early operation, but all other cases are best treated by rest and observation. At the end of fourteen days, if the tumor be stationary or decreasing in size, the patient may be transferred to the base, where spontaneous cure will sometimes occur after several weeks, or operation can be performed when the limit of diminution is reached.

An aneurism existing for even a few hours is the best preparation for ligature owing to the fact that the collateral circulation is gradually and not suddenly called upon to supply the area of deprivation, and can adequately cope with the requirements of the tissues when complete cessation of supply through the original channels is effected. This is well exemplified in the case of the popliteal artery, where severance of the vessel by a bullet, even without much loss of blood, almost invariably leads to gangrene of the leg, while ligature for traumatic aneurism very seldom does so. The Lupfier tube aims at the performance of this function of an aneurism in the provision for a modified supply of blood while the critical period of collateral expansion is tided over.

During thirty months in a casualty clearing station, amongst a total of 44,000 wounded, Shaw has seen only three cases in which ligature of the common carotid appeared to be indicated, each for one of the three conditions enumerated above—severe secondary hemorrhage, dangerously superficial aneurism, and a tumor which increased in size despite rest in bed.

The first case, the wound inflicted by a rifle bullet and eight hours later treated by an intravenous saline solution containing two drachms of brandy, suffered from a severe reactionary hemorrhage. The plugs were removed from his huge wound, together with many fragments of the jawbone. A ligature was applied to the twisted end of the facial artery, which was free in the wound. The following morning another severe hemorrhage occurred, and the patient was anesthetized and his internal carotid was tied. The wound became extremely septic. Violent hemorrhage took place while the patient was drinking lemonade. The common carotid was then tied through a transverse incision, this wound remaining clean. The operation was followed by alphasia and hemiplegia for three days. Both thes conditions cleared up entirely.

The second case was that of a large superficial arteriovenous aneurism incident to, a shell wound. In view of this the common carotid was tied. The patient recovered.

The third case, the wound on the right side of the neck by a shell fragment, walked into the casualty clearing station eight hours after being hit. The wound was small and in the midline of the sternocleido. There was immediate bleeding, which stopped spontaneously. A small pulsating tumor was felt, together with a thrill and bruit. This tumor increased in size for two days and caused little discomfort. After progressive betterment until the eighth day there was increment of swelling, which occurred toward the root of the neck. The comomn carotid was ligatured about one and a half inches above the innominate bifurcation. The apparent aneurism sac was opened, and from it flowed creamy pus: An inner tumor about the size of a large hen's egg then became visible as the real aneurism. The aneurismal sac was opened, a distal ligature applied, and the wound not closed. The patient died four hours later.

Plastic Surgery in Pulmonary Tuberculosis.—The vogue of lung collapse therapy has stimulated the study of this subject, of the present state of which L. Spengler (Centralblatt fur Tuberkulose-Forschung, June, 1917), gives a critical survey. Beginning with the works of Quincke (Bonn) and of Carl Spengler (Davos), who advocated rib resection to facilitate obliteration of chronic cavities, a real extra-pleural thoracoplasty was first advocated by Brauer, in cases where the existence of pleural adhesions prevented or limited the induction of an artificial pneumothorax, and first carried out by Friedrich. However, this "total" operation, besides being dangerous to life, left the thoracic wall too weak; the mediastinum flapped to and fro with the respiratory movements and circulatory disturbance was caused. In order to avoid these dangers, Brauer (Hamburg) altered the plan of the operation. He did not touch the tenth rib, so as to spare the attachments of the diaphragm, used local anesthesia, and operated in two stages, compressing first the lower, and presumably more healthy, part of the lung, so as to lessen the risk of aspiration into it of sputum expelled from the apical and more diseased region. This technique is the foundation of that now practiced by Sauerbruch (Zurich). Sauerbruch also operates under local anesthesia and in two stages resecting the ribs behind ere —if that be needed—he divides them in front. A paravertebral, longitudinal, hook-shaped incision is used, and before closing the wound the vertebral border of the scapula is pressed under the proximal rib-stumps, in order further to compress the lung. Wilms' original "Pfeilerresektion" is condemned as insuffiicent; the deviser himself has extended it until it amounts to a thoracoplasty. Extrapleural thoracoplasty must, however, be suited to individual requirements, must always be preceded by an attempt to establish artificial pneumothorax, and is especially useful for basal cavities. In a localized form, also, it is, of course, highly applicable to obliterate a tuberculous empyema or a partial pneumothorax space which, despite tapping, secretes chronically a thick effusion. Other strictly surgical measures in use to obtain compression of (particularly apical) pulmonary tissue are pneumolysis and plugging. Tuffier introduced the former procedure, resecting the second rib, and freeing extra-pleurally the pulmonary apex with a blunt dissector, and then maintaining its separation from the chest wall with nitrogen gas, or better, a fresh lipoma. Baer (Davos) used as a plug paraffin-vioform-bismuth. The drawback to plugging is, however, that the substance introduced, even a fatty tumor, may be expectorated after having ulcerated through the wall of the compressed cavity; also there is much risk of sepsis even with all care. The former accident happened to Tuffier four times in 14 cases and to Sauerbruch seven times in 28. As for the more or less isolated adhesions often shown by radioscopy to limit the area of an artificial pneumothorax, these have been dealt with intrapleurally by ligature and division, and also by division with the cautery under observation with a thoracoscope. They often contain caseous matter and largish blood-vessels. Saugman had thus a fatal case of hemorrhage.—London Lancet.

Pneumococcic Infection Simulating Typhoid Fever.—S. I. de Jong and G. Magne (Paris Medical) describe a symptom complex observed in a number of Algerian or Creole riflemen so resembling that of typhoid fever that all the patients were sent to a special hospital with that diagnosis. All showed prostration, a temperature frequently exceeding 40 deg. C., a coated, dry tongue, a rapid pulse, never dicrotic, frequently a slightly enlarged liver and markedly enlarged spleen rather severe abdominal pains of varying situation, nearly always marked constipation, and sometimes vomiting. A few disseminated rales were noticed, and exceptionally a few localized subcrepitant rales, which soon disappeared. Upon more careful inquiry, the condition was found to have arisen suddenly sometimes during a drill, with a pronounced chill, at times with vomiting, followed by a definite rise in temperature. Diarrhea and the rose spots were wanting, and the spleen was larger than in typhoid. In a few instances, early in the disease, there were noted slight neck rigidity, delirium, and a beginning Kernig sign which for a short period suggested a diagnosis of cerebrospinal meningitis. The final reduction in temperature was always rapid and sometimes sudden, and at times was preceded by temporary weakening of the pulse and restlessness, as before the typical pneumonia crisis. The essential feature is asserted to have been the absence of special involvement of any single organ. Death occurred in but one case, the autopsy showing acute hemorrhagic pericarditis, small disseminated foci of bronchopneumonia, greatly enlarged tracheobronchial lymph nodes, some with suppuration, the spleen riddled with pyemic abscesses. Bacteriological study showed the case to have been one of pneumococcic septicopyemia. Of twelve cases examined six yielded a positive pneumococcus blood culture. Formerly, such cases would probably have been labelled gastrointestinal grippe. A similar featureless symptomatology has often led to confusion with either typhoid or grippe. Frequently, as in the cases reported, the condition giving rise to such symptoms turns out to be a pneumococcosis.

A New Physical Sign in Pneumothorax and in Pleural Effusion—Williamson, in The London Lancet, has observed this sign so frequently that he is likely to consider it valuable confirmatory evidence of either pneumothorax or pleural effusion. The sign consists in a markedly diminished blood-pressure in the leg as compared with that in the arm on the same side, a difference of 10 mm., and in many cases of over 20 mm.

In normal persons the systolic arterial blood-pressures taken simultaneously with due precautions in the arm and leg of the same side will be found to yield practically identical readings. In some pathological conditions differences will be found. Leonard Hill observed that constantly in cases of aortic incompetence. Anatomically the pleura on each side, more especially on the left, comes into relation with the descending thoracic aorta as it lies on the vertebral column, and the writer suggests that the most obvious cause is that when the pleural cavity is distended with liquid or with gas pressure upon the aorta this causes to a greater or less degree corresponding diminution in systolic pressure distally to the compressed area.

The methods of observation have been as follows: The patient has been at rest in bed, so that the armlet used for the leg reading and that for the arm have both been at the level of the heart. The Riva Rocci type of instrument was used, an Oliver's armlet of a width of 12 cm. being placed round the upper arm, and another one round the calf of the same side. Both armlets were connected by means of a three-way tube with the same pump and manometer. One observer took the systolic reading in the radial artery, the other in the dorsalis pedis or posterior tibial, and for alternate observations the two observers changed about so that the one who had previously taken the arm reading now took the foot one, and vice versa, the object of this procedure being to eliminate any personal equation. The readings taken were those obtained on letting the air out of the armlets after inflating them to a degree greater than necessary to obliterate the pulse in both limbs. The results are recorded in mm. of mercury.

Cilvol: a Useful Germicide.

The signal property of Silvol is its germicidal and non-irritating effect on inflamed and infected mucous membranes. This notable proteid-silver compound contains approximately 20 per cent. of metallic silver. It is non-toxic. It is freely soluble in water, and its solutions do not require filtration. It does not coagulate albumin, and it is not precipitated by proteids or alkalies. It stains less than other proteid-silver combinations.

Silvol may be used in the treatment of infected and inflamed mucous membranes in strengths ranging from 2 to 50 per cent. It has been suggested that the addition of a small proportion of glycerin to Silvol solutions will prevent them from spreading too freely over the surfaces to which they are applied; that the glycerinized solution forms a thin film over the surface that does not immediately dry off. In other words the glycerin "holds" the Silvol to the spot.

Silvol has been successfully used in the treatment of nasal and pharyngeal inflammations, both acute and chronic. One practitioner reports his experience with a 20-per cent. solution of Silvol in over five hundred cases of various nasal, laryngeal and ear diseases. The solution was used either as a spray, instillation, or topical application.

An eastern specialist reports gratifying success with Silvol in the treatment of twenty-five cases of antral infection. The treatment consisted in first irrigating the sinus with normal salt solution, then injecting it as nearly full as possible with a 10 per cent. solution of Silvol, repeating daily. Usually the cases cleared up in less than a week, often within three or four days. Another writer observed most striking results in tracheitis and bronchial asthma. In these cases a 10 per cent. solution was applied twice a week.

A prominent urologist reports the successful use of Silvol in one hundred cases of posterior urethritis, gonorrheal in origin. A 10 per cent. solution was applied, once a day, to the posterior urethra with an Ultzmann syringe, and each patient received a supply of the same solution for home use, to be applied two or three times a day.

Results from the use of Silvol in the treatment of eye diseases are highly favorable. A well-known ophthalmologist says: "My clinical observations of Silvol evidenced to me that in all forms of acute conjunctivitis, acute epidemic to acute gonorrheal, this product is a powerful bactericide, apparently absolutely non-irritating; even in a solution of 50 per cent. used as frequently as every fifteen minutes, day and night, for a period of three days."

An experienced surgeon makes the assertion that Silvol is a better application in ophthalmia of the new-born than silver-nitrate. It can be used with less risk and the writer thinks he can control any case with it.

Silvol is supplied in the following forms: Ounce bottles; six-grain capsules, bottles of fifty; Vaginal Suppositories of Silvol, 5 per cent., boxes of one dozen; Silvol Ointment, 5 per cent., collapsible long-nozzled tubes, two sizes; Silvol Bougies, 5 per cent., boxes of 25 and 100.

Penetrating Wounds of the Abdomen. —Armstrong, in The London Lancet, based on Serbian experience, makes a plea for operation in all cases of intestinal perforation due to bullet wounds. Cases not having operative treatment were placed in the sitting Fowler position. Subcutaneous saline was given by Lane's apparatus, as much as six points in twenty-four hours in some cases, together with pituitary extract and camphor in oil. Neither food nor fluid was given by mouth for the first three days. Hyoscine and morphia for restlessness. After preliminary stimulation operation was performed on all patients having intestinal lesion; by either right or left rectus or midline incision. Cases that recovered had no drainage tubes in the peritoneal cavity, and these should be discarded except when there is a definite localized abscess. A cigarette drain was always left down to the peritoneum. The wounds always suppurated, due to the bacillus coli. Thus a certain number of antibodes form and have a beneficial influence on the underlying general peritonitis.

Subcutaneous saline was used as an after-treatment, the rectal method being regarded as inefficient. His experience is limited to ten cases. Two of them showed no intestinal perforation, and both recovered. Of ten cases with multiple perforation of the intestine of over thirty hours 'duration, seven died and three recovered. Of seven cases treated more conservatively of more than thirty hours' duration, all died. One case of over thirty hours' duration, treated by the Murphy operation, also died. Three cases illustrating rigidity of recti due to injury of diaphragm, all recovered.

Armstrong states that hemorrhage is the most frequent cause of death in wound of the abdomen in the first hour.

Roundworm was present in two of the cases. nItermittent rigidity of the recti muscles is an important sign of an injured diaphragm. The rigidity may last for about thirty-six hours. It is not to be confounded with the rigidity of peritonitis.

The Antiseptic Properties of Acr'flavine and Proflavine and Brilliant Green.—Gulbransen and Thornton (British Medical Journal) present a report to the Medical Research Committee embracing results of an intensive study of these substances. They summarize their findings as follows:

Flavine compounds and brilliant green are antiseptics which exert a slowly progressive bactericidal action. Concentrations of these substances, which at first inhibit and finally kill bacteria, are without harmful effect on phagocytosis or on the tissues locally or generally; hence they are especially suited for therapeutic purposes in infected wounds. Flavine compounds may be applied to the peritoneum with safety.

Flavine compounds (acriflavine and proflavine) are enhanced in their bactericidal potency by the presence of serum; brilliant green, in common with most other antiseptics, is reduced in its activity by serum.

The most suitable method of application of an antiseptic for therapeutic purposes must depend very greatly on its behavior in the presence of serum. When the antiseptic is inactivated by serum, frequent renewal of the watery solution is indicated, as in Carrel's procedure; this ,of course, is only permissible provided that the substance is not in itself toxic.

Brilliant green satisfies the requirements for application by repeated irrigation, as a powerfully bactericidal solution (1:200) in water is practically innocuous to the tissues. On the other hand, since flavine compounds are most bactericidal in serum, the indication is to arrange the wound dressing so that these antiseptics may act in a serum medium; also, since these bodies are not rapidly thrown out of action by serum, accumulative deposit should be prevented by avoiding too frequent additions of considerable quantities of the antiseptic solution. Clinical experiences have substantiated these conclusions, and the evidence at disposal points to the application of flavine bodies by means of gauze packing or some appropriate modification of this procedure as likely to yield the best results. Thus there is evidence that, by taking full advantage of the properties of flavine bodies, a relatively simple technique may be followed.

The application of the flavine compounds, especially for the purpose of preventing the onset of septic manifestations, in early wounds is emphasized; also their use for preventing exacerbations after operating in areas already infected.

Operative measures are an essential preliminary to the effective use of therapeutic antiseptics in wounds, since the antiseptic can act only when brought into intimate contact with the infected tissues.

Results of Treatment of Chest Wounds.—Elliott, in The London Lancet, analyzes the results of treatment in 170 cases, excluding those which died in base hospitals and many others which could not be traced. The impression is gaining ground that these wounds have a high mortality, but it is a striking fact that if the victims survive the first month their wounds very rarely prove fatal subsequently or seriously disabling. Lung laceration, per se, is of little moment in prognosis as it heals rapidly and is seldom a source of sepsis or spreading local infection. Simple traumatic pneumothroax is wholly benign even without treatment. Sterile hemothorax, if aspirated to prevent large clots, is almost always promptly and completely recovered from, and secondary aspiration is seldom required because there is little tendency to repeated hemorrhage or extensive serous effusion. Small primary effusions do not require aspiration. Large, clotted, sterile hemothorax frequently fails to give a good result owing to interference with subsequent lung expansion. Where sepsis occurs in large clots recovery is likely to be rapid and complete under drainage on account of digestion of the clots and their prompt discharge. With early and efficient drainage the vast majority of men with septic hemothorax recover with little or no permanent disability if they survive the first two weeks. During the first two weeks, however, this is a very fatal form of chest injury, having a mortality of nearly fifty per cent. In aseptic chest wounds retention of the foreign body causes no harm. The conservative plan of surgical noninterference is justified only in cases free from sepsis. Surgical intervention is essential in all cases of the following types which survive the initial hemorrhage: 1. Cases with air suction and blood leakage through large open holes. 2. Cases with tangential wounds and severely comminuted ribs. 3. Those with large retained shell fragments.

The Mode of Existence of Flies During Winter.—McDonnell and Eastwood (Journal of the Royal Army Medical Corps) alluding to the fact that most investigators maintain that flies in their fully developed form are hibernating insects, state that careful search has failed to corroborate this theory. They believe that eggs which are deposited in manure and refuse dumps in late autumn are the sources from which the yearly "plague of flies" originates, and that the hatched-out larvae in a dormant state persist throughout the winter and come to the surface in the spring or early summer.

They therefore made a careful investigation of the manure dumps and disused trench latrines. They found in March after a very severe winter that in a heap of old manure living larvae were found at a depth of three feet. This heap was covered with grass and weeds. Larvae were also found in human excreta dropped and covered with six inches of earth the preceding autumn, and in similar material covered with two feet of earth. Pupae which in the larval state had evidently migrated from the manure and excreta heaps were found about two feet from the respective dumps lying at a depth of about one inch below the ground surface. The larvae were placed under favoring experimental conditions and afterward became fully developed flies.

Larvae found at a depth of two feet in a manure heap were apparently dead, but revived when exposed to heat; evidently they were hibernating.

These preliminary observations open up a new field of investigation and indicate the inadequacy of the present hypothesis that the summer "plague of flies" is mainly dependent upon the survival throughout the winter of the adult fly in some suitable nook or cranny.

It would appear that the fly either passes the winter in the pupal stage as do many insects, or that fly larvae may even have the power of undergoing hibernation with intervals for feeding during the spells of warmer weather. It is known that fly larvae do not mature for probably several weeks when fermentation of their food supply does not take place. It will be seen, then, that manure heaps will be a source of danger at any time of year, and if the spread of flies is to be prevented, manure should either be burnt, or spread out in thin layers; dumping in the immediate vicinity of camps and buildings should be avoided. Covering over the heaps with earth, or sowing the surface with grass or other seeds, would appear to be of doubtful value once eggs are deposited in the manure.

The Technique of Lumbar Puncture.—Foster, in The London Medical Lancet, writes on this topic and points out that in the first place a restricted flow may occur drop by drop, simulating the normal rate, or, on the other hand, five or six drops may run in rapid succession, followed by a pause. This latter phenomenon would at once suggest that the mouth of the cannula was not lying free in the arachnoid space. Another point is that when such a restricted flow occurs the respiratory movements are not imparted to the column of fluid. The explanation of this occurrence must of necessity be largely a matter of conjecture. A possible explanation is furnished by the surmise that the dura mater is pushed in front of the needle and then pierced, the mouth of the cannula thus lying in a narrow chink between the approximated dorsal and ventral dura mater. The dura mater is bound to the bony canal by loose areolar tissue which could be easily separated by a comparatively blunt needle. In this regard Foster might remark that this contretemps occurs most frequently when the needle fails to reach the theca at the first plunge and has already struck bone. Further, he had more often met with this difficulty at the end of a series of eight or ten operations on different patients when the same needles had to be reboiled and used a second time. The simple maneuver of gently withdrawing the needle will frequently establish a good flow, possibly by widening the interval between the surfaces of the dura mater. Rotation of the needle will in some instances establish a full flow, particularly if the needle has been introduced in such a way that the mouth of the cannula does not look directly toward the cephalic aspect of the arachnoid space. If these maneuvers fail a full flow will always be obtained by taking a sharp needle and selecting another space.

A "dry puncture," except in cases of hydrocephalus, he takes to be proof positive that the needle has not entered the theca. Where the fluid is thick and purulent and a good flow cannot be obtained even with the assiduous use of the stylet it seems probable that, as Dr. Horder suggests, the needle may have entered a loculus. A fresh puncture at another level will often secure a more abundant flow. When the fluid is blood-tinged and not obviously purulent it is better to perform a fresh puncture in order to obtain fluid free from blood for cytological examination. Foster has rarely found fluid blood-stained on a second puncture at another level.

The Principles of the Transfusion of Blood.—Stansfield in the Proceedings of the Royal Society of Medicine summarizes his views as follows:

1. Transfusion has been successfully employed in the treatment of various kinds of anemia and in arrest of spontaneous hemorrhage. It has also yielded promising results in cases of serious infections and in certain toxemias.

2. The ultimate prognosis in cases of anemia depends upon the power of reaction in the bone-marrow, and this can only be adequately determined by observing the results of treatment.

3. In cases of pernicious anemia both increased red cell production and diminished red cell destruction may result from transfusion.

4. In cases of pernicious anemia the age of the patient, the duration of the disease, and the condition of the bone-marrow as indicated in the peripheral blood, have hitherto proved to be the best guides to the progress subsequent to transfusion.

5. The optimum dosage for transfusion is not yet determined, but it is probable that moderate repeated doses are preferable to large single doses in the treatment of chronic anemias. Very small doses may sometimes be of value.

6. The donor should be a healthy adult with negative Wassermann reaction. The serum of the donor should not agglutinate the corpuscles of the patient, and the serum of the patient should not agglutinate the corpuscles of the donor. Agglutinins should be excluded by tests done immediately before the transfusion, and a single examination is not sufficient to establish the compatibility of two bloods on all future occasions. If agglutinins are absent, hemolysins will also be absent.

7. If there be great urgency, and testing of the blood of patient and donor be impracticable, a small preliminary transfusion should be done half an hour before the main mass of blood is transfused so that gross incompatibility may be recognized in time.

Febrile reactions occur after about 25 per cent of transfusions, even though the bloods of donor and patient have been proved to be "compatible." Rigors occur in about 10 per cent of the cases.

9. It may prove desirable to investigate the bloods of donor and patient with regard to factors of which we as yet know nothing, not merely for the sake of avoiding accidents, but also to determine whether a given donor is likely to afford the maximum of benefit in a particular case.

10. The indirect method of transfusion, employing a glass receiver and sufficient sodium citrate to prevent coagulation of the transfused blood, is simple and involves no special danger.

The Treatment of 102 Carriers of Amebic Dysentery With Emetine-Bismuth-Iodine.—Waddell, Banks, Watson, and King, in The London Lancet, make a report on this subject. They state that the behavior of each case under this drug was very much the same.

They practically all were either purged or they vomited, or both. Usually a man who vomited much did not have so much diarrhea, and a man who had much diarrhea did not vomit much; and usually whichever of the symptoms predominated at first, that was the most marked symptom throughout. Very few were violently attacked both ways. Out of the 102 cases, only two or three were not affected at all, either by vomiting or diarrhea, and a few had one natural evacuation daily; while five vomited only once. The worst cases had on some days ten or twelve motions in 24 hours, or vomited five or six or even more times in the day. Of real tolerance of the drug there was none; certainly a number of men as time went on were not so often sick, but that was the best that could be said. The vomiting usually began about an hour after taking the dose, the diarrhea not often sooner than three hours. Two men had violent colic and required fomentations. It was noted that in the vomit the brick-red color of the drug was fairly often seen, showing that the keratin coat dissolved before reaching the intestine.

Various stomach and bowel sedatives were tried to control irritation, but none were of any real use except tincture of opium, and that was only used in extreme cases. The tablets were tried in powder, but the vomiting was sooner produced and increased in intensity, so this was discontinued. A few of the most disturbed cases were kept entirely in bed, which relieved but did not save them from attacks of diarrhea and vomiting.

In the three cases of old carriers the effect of the treatment on the general health was very pleasing. All three, particularly a staff sergeant of the Indian army, were weak, thin, pale, and depressed; after the course appetite came back, weight was regained, and all three reported that they felt like new men. In most cases, however, the men were, for the time being, considerably pulled down by the vomiting and diarrhea produced by the treatment. All were heartily glad when the ordeal ended and they were set free.

Tables show the curative properties which the drug certainly possesses; but until its preparation has been improved, and its intensely irritating properties abated or removed, a just estimation of its value in chronic dysentery cannot be made.

Heart Disturbances the Result of New Asphyxiating Gases.—Fiessinger (Bulletin de l'Academic de Medicine) points out that, besides the pulmonary, gastrointestinal, and nervous types of gas intoxication, there exists a more recent, as yet less common type in which manifestations similar to those witnessed during laboratory studies of nitrogen fixation and in the manufacture of nitric acid are observed. The intoxication in the soldier is, however, sudden and overwhelming instead of gradual. Dizziness is experienced; the lower limbs give way; there is burning from the throat to the epigastrium; dyspnea, vomiting, and salivation appear; the extremities become cold; and unconsciousness, which may last several hours, follows. Later the weakness of the limbs, pallor, burning and vomiting persist, and the pulse rate at times descends to thirty or even twenty-five a minute, with weak heart sounds and occasionally an auricular extrasystole. The blood pressure remains low and the urine may show traces of albumin. For a period of three to six months, syncope occurs whenever an attempt is made to rise from recumbency; later, the normal pulse rate and amplitude gradually return, but general weakness persists for a long time. In similar, though milder, conditions among laboratory workers, hydrocyanic acid was detected. Slow poisoning with syncope several times a day, and mild forms with mere slowing of the pulse, the latter especially through incomplete combustion of of motor fuel, are also observed. The medullary functions relating to the heart and gastrointestinal tract seem to bear the brunt of the intoxication. The treatment comprises venesection, injections of ether and camphor, bismuth, theobromine, small doses of caffeine and strychnine, and rest in bed for months. Digitalis acts poorly and adrenalin is uncertain.

The Medicinal Use of Glycerin.—An editorial in The London Lancet states that in England there is now no glycerin being allotted for medicinal purposes, and phramacists who have exhausted their supply can only obtain more by borrowing from those who have some left. As was noted four months ago, the Ministry of Munitions considered that the stocks then in the hands of pharmacists should be sufficient to meet the legitimate demands of prescribers. An analysis of prescriptions undertaken by the Chemist and Druggist thirty years ago showed that glycerin came out ninth on the list of favorite drugs, and its use both in mixtures and as a toilet preparation has probably much increased since then. But neither as a solvent, a demulcent, or a flavoring agent is glycerin at all indispensable, and medical men would do well to assist the pharmacists in restricting its use to the few remaining purposes—perhaps in the case of calf lymph or in organo-therapeutic extracts—in which hardship would result from its withdrawal. It should hardly be necessary to point out that to prescribe glycerin freely in a lotion might place the conscientious pharmacist in a difficult position. He is prohibited by law from supplying it direct to one customer for toilet purposes, and it would be invidious for him to supply it to another customer for the same purpose on a medical man's orders.

Chestnuts and Acorns in War Service.—In an editorial in The London Lancet reminds us that the manufacture of modern munitions has so far implied a certain demand on cereals which otherwise could be used for food. This is an unfortunate diversion, and it is gratifying to learn that, instead of using cereals, other materials not so far made fit for human food, as, for example, the common horsechestnut, are to be employed. We may point out similar possibilities of which are wasted every year. The composition of these nuts has something in common, as will be seen from the following figures: Horse-chestnut—water, 38.9 per cent; protein, 4.8 per cent; fat, 4.6 per cent; carbohydrate, 50 per cent. Acorn—water, 6.3 per cent; protein, 5.2 per cent; fat, 43 per cent; carbohydrate, 45 per cent. The most important constituent of both is the carbohydrate, in the form of starch, while the acorn should have further value on account of the substantial proportion of fat which it contains. Neither nut has as yet been used to any extent for human consumption, and it is possible that their utilization in some way or other, whether for food purposes or not, may be one of the results of the relative food shortage. The first step has now been taken in the substitution of these nuts for cereals in the production of munition agents. Other abundant vegetable products may also be pressed into service. It is, of course, possible to convert wood, linen, cotton, and the like into sugar, but the process of conversion does not appear to have attained practical dimensions or to have reached an economic stage.

New Dietetic Treatment of Diabetes.—P. J. Cammidge, in The London Lancet, emphasizes the importance of dietetic regulation in the treatment of diabetes and lays special stress upon the need for the very accurate control of this treatment. The administration of carbohydrate should be controlled by the sugar in the urine, but more especially by the blood sugar, that of the protein by the nitrogen balance as determined from the urine, and of fat on the basis of the acidosis and the amount of carbohydrate which the patient can take. The last is of importance since it has been proved that fat is completely burned in a direct ratio to the amount of carbohydrate which is available for consumption and which is consumed. Each patient should be studied from all of these aspects and the diet painstakingly adjusted to his absolute needs. Periods of fasting are of value, as is the Allen treatment, but neither should be employed in a routine way. The giving of large amounts of fruits and vegetables is of great importance since they are the chief sources of alkalies for the body and go a long way in the maintenance of an alkali balance. It is often more harmful to allow a slight excess of protein or of fat than to permit an excess of carbohydrate to the extent of producing a slight glycosuria. The special diabetic foods should never be given without knowledge of their exact composition and allowance for their protein content.

The Great American Habit.

"The great American habit" said a porminent physician a short time ago, "is neither rapid eating, nor dining 'too wisely and well.' These are evils, to be sure, but the one great habit to which most Americans are addicted is the routine use of laxatives and cathartics. Is it any wonder some European doctor has said we are a nation of constipationists! Why, physic has become only a little less than the oxygen we breathe."

How true all this is, most physicians of broad experience will readily agree. Physic the first thing in the morning, physic before or after each meal, and physic the last thing at night! And only one purpose throughout, to move the bowels! Never a thought in regard to regulating them.

This is the pity of the whole situation, for instead of getting relief and correcting constipation, the average person is simply becoming more and more a slave to the cathartic habit.

To a certain extent this is not surprising for the great majority of remedies are simply "movers" not "regulators."

It was recognition of this fact that led to the preparation of Prunoids. Here is a remedy that is much more than a physic. Used as the physician's judgment will dictate, according to the needs of each patient, Prunoids will not only move the bowels satisfactorily without the least griping or disagreeable effect but will so stimulate the physiologic processes of the intestinal tract that evacuations will become natural and regular.

It is the notable efficacy of Prunoids in correcting intestinal torpidity and restoring functional activity of the bowels that has led so many physicians to prefer this remedy to all others for the relief and permanent correction of chronic constipation. They have learned that the use of Prunoids offers a means not alone of correcting constipation, but what is especially gratifying, of curing "the great American habit."

Colloidal Sulphur.—A. Cawadias (Bulletin de l'Academie de Medicine) administered intravenous and intramuscular injections of colloidal sulphur in subacute rheumatism, with prompt and complete results, pain ceasing, deformity showing retrogression, and joint functions being restored. The intramuscular injections, without causing the marked reactions which followed intravenous injections, yielded equal results. Subacute and chronic rheumatic cases subjected to chemical analyses showed elimination in the urine of a large amount of sulphur in the form of sulphates, phenlysulphates, and incompletely oxidized sulphur. In the twenty-four hours following administration of colloidal sulphur, the amount of sulphur in the urine decreased, and the reduction of sulphur elimination became constant as recovery set in. During convalescence, sulphur nutrition was improved and the amount of sulphur containing wastes gradually returned to normal. On the white blood cells it exerts an action comparable with that of metallic ferments. The leucocyte count falls immediately after the injection but rises again some time later. The mononuclears increase. There is thus clearly a leucolytic action, noted likewise when colloidal sulphur is injected in leucemic cases.

The Most Effective Therapeutic Remedy for Nervous Diseases.

In the treatment of many nervous diseases it not infrequently happens that the after-effects, or sequelae of the remedy are worse than the disease. This statement applies in particular to the bromides in the forms commonly employed. Valuable and effective as they are whenever a sedative or anti-spasmodic is needed, they must be prescribed with the utmost care and discretion, else the results, to put it mildly, may be unfortunate in the extreme.

The physician therefore, cannot be too critical and cautious in selecting the preparation of the bromides he uses, especially if it must be given for any considerable period. Many men know the advantages of Peacock's Bromides but to those who do not it should be pointed out that this high grade product easily stands at the head of available bromide preparations not only in freedom from objectionable effects but also in therapeutic efficiency.

Extended clinical experience has shown that owing to the purity and quality of the constituent salts, this combination does not upset the organs of digestion nor give rise to the highly disagreeable condition known as bromism.

Physicians who use Peacock's Bromides know the satisfaction of accomplishing not only the results they seek, but without creating any disagreeable and annoying conditions which call for explanation and excuse.

Practical Wound Treatment.

Many and various are the antiseptics that have been recommended for use in connection with the Carrel-Dakin technic, but for genuine convenience as well as thoroughly satisfactory results Burnham's Antiseptic Powder is a product that has proven its practical worth in no uncertain way. Simple in character, this preparation nevertheless makes it possible to apply the latest ideas of wound treatment with an ease and facility that will appeal to the practitioner who is busy, but who still aims to give his patients the advantage of the latest advances of medical science.

In Burnham's Antiseptic Powder the earnest physician will find an extremely serviceable preparation that he will not allow himself to be without, as he learns the excellent results he can obtain whenever antiseptic measures are required. For further information, and sample, address Burnham Soluble Iodine Co., Auburndale, Mass.

Urinary Amebiasis with Cystitis.—Wright (Journal of Tropical Medicine and Hygiene) reports the case of a young woman, twenty-six weeks pregnant, who began to notice an undue freqency of micturition, gradually increasing in severity until small amounts of urine, followed by marked strangury and the passage of a few drops of blood, were evacuated about five times every hour. The turbid urine showed many amoebae, mostly spherical together with some cysts. A diagnosis of amoebic cystitis having been made, emetine hydrochloride was given hypodermically in daily doses of one to three grains. At first improvement was but slight. Later, the bladder was repeatedly washed out with boric acid solution and one half grain of emetine in half an ounce of sterile water left in the bladder. Uninterrupted improvement followed.

"We think that all who have made a test of the action of Tongaline, either in the acute stage of grippe, or in the period of convalescence marked by an extreme nervous disturbance so often present, will be convinced that the remedy has a direct and marked influence for good.

Cod Liver Oil in Chronic Bronchial Disorders.

It will be found that many of the chronic bronchial inflammations respond quickly to the administration of Cord. Ext. Ol. Morrhuae Comp. (Hagee). The reasons for this are the definitely selective influence this product has for bronchial and pulmonary tissues and the power it possesses to add strength to the tissues in general, this combination of properties serving in efficient manner in overcoming the chronic bronchial inflammations so common during the winter. Cord. Ext. Ol. Morrhuae Comp. (Hagee), is of exceptional palatability, a feature that makes it of unusual value in women and children. Its use should be continued throughout the winter in those susceptible to bronchial and pulmonary disease.

Ampoules Much in Favor.

The convenience of the ampoule commends itself to the medical profession and more and more of them are being used with entire satisfaction.

As practitioners make use of sterile solutions in this form and become convinced of the possibilities in ampoule medication there is an ever increasing demand on the pharmaceutical houses to enlarge the extent of the formulas.

Eli Lilly & Company reports that the demand for ampoule formulas has been increasing to such an extent that it was necessary to greatly enlarge its facilities and also to add to its already long list of formulas.

This house has, today, the reputation of offering the most comprehensive line of ampoules produced in this country and already is known, quite apart from its fine reputation as a pharmaceutical and biological concern, as the ampoule house.

Bacterial Infections of the Urinary Tract From the Standpoint of Vaccine Therapy.—Basu in the Calcutta Medical Journal states that the value of treatment of urinary infections with vaccines may be summarized as follows:

1. Vaccines are of use in acute and subacute infections of the urinary tract.
2. As the flora causing the infection is very varied, an autogenous vaccine should be used whenever possible. (In infections with coliform bacilli an agglutination test should be carried out with the patient's serum against the bacillus isolated; if possitive, the chances of success with vaccines are greater.)
3. Vaccines are not of much use in chronic afebrile cases of pyuria; they may alleviate the symptoms, but do not effect a cure.
4. Bacteriuric cases are not much benefited with vaccine treatment, but considering the fact that a few cases have been influenced, the treatment is worth trying in "carriers."
5. Vaccine treatment should always be carried out in connection with general treatment, rest, dieting, urinary antiseptics, etc. The treatment should not be carried to extremes.

Plancental Transmission. — Plass (Johns Hopkins Hospital Bulletin) continues his previously reported work, substituting the acetic acid precipitation method for oFlin's method. It was not possible to show any definite relationship between the material and fetal whole blood in any given case, but in both series there was a close agreement of the plasma values, which confirms the theory that the creatinine bodies are directly diffused through the placenta. The red blood cells have an increased power to store creatine, both in the newborn and in the parturient woman. Despite reports to the contrary, a higher creatine content is not always found in the maternal cells than in the fetal cells.

The reawakened interest in ipecac is due to its proven specificity in amebic dysentery and to the fact that large doses of the absorbed ipecac alkaloids may be taken by mouth without nausea. Given in this way ipecac has been used extensively in a number of diseases where it was heretofore impracticable. It has been shown that the drug possesses decided value in pyorrhea, amebic infections of the tonsils, typhoid fever, and various intestinal disturbances such as flatulence, diarrhea, and constipation. The almost startling results that have been attributed to the administration of large doses of ipecac by means of this new compound, make it appear that its field in therapeutics is even wider than first anticipated. It is said to be quite possible to give patients the equivalent of one hundred grains of the drug daily without nausea or vomiting and the tablets may be crushed before swallowing.

Rules Against Nurse-Anesthetists.—The Ohio State Medical Journal of September 1, 1917, states that the giving of various drugs to produce anesthesia when surgical operations are being performed constitutes the practice of medicine, under the provisions of the medical laws of Ohio. It is, therefore, illegal for a nurse or any person other than a licensed physician to administer an anesthetic in Ohio.

This opinion, which confirms a similar opinion rendered by Attorney-General Hogan in 1911, was handed down August 14 by Attorney-General Joseph McGhee. It is issued to Mr. Howell Wright, member of the Senate from the Cleveland district, who is also secretary of the Cleveland Hospital Council. Mr. Wright authorizes the statement that this opinion will be contested in the courts, and that very shortly the Supreme Court of Ohio will be asked to pass upon the question as to whether a nurse, acting under the direction of a surgeon, may administer an anesthetic. Undoubtedly the case will be bitterly fought, as the organized anesthetists will seek to have the court sustain Mr. McGhee's ruling.

Building Up After Pneumonia.

Every physician recognizes that one of the most important things in the management of a case of pneumonia is building up the patient after the resolution of the inflammatory process.

For this purpose Cord. Ext. Ol. Morrhuae Comp. (Hagee) has been found of great dependable worth, owing to the certainty with which it charges the reduced tissues with the necessary reconstructive elements. It is a most rational therapeutic procedure to put the pneumonia patient on Cord. Ext. Ol. Morrhuae Comp. (Hagee) for by so doing the period of convalescence is shortened and the patient is restored to his normal vigor all the more quickly. The advantage of using Cord. Ext. Ol. Morrhuae Comp. (Hagee) is that while it possesses every remedial and nutritive quality of the plain oil, it inflicts no burden on the gastric apparatus, hence it may be given for an indefinite length of time without causing distress.

Peculiar Edema.—Maase and Zondek saw at Charite Hospital Medical Clinic, Berlin, from 30 to 40 cases of a peculiar type of edema in men between 45 and 60. The extremities, face, genitals, serous sacs, etc., were attacked. Patients also presented diarrhea, polyneuritis and cardiac disorders. Naturally, no one patient suffered from all of these accidents. All known types of edema could be excluded. The affection may have been due to defective alimentation for several patients at once recovered when fat was fed to them. Similar edema has been seen in nurslings fed on flour exclusively and in diabetics on the oatmeal cure.—Deutsche Medizinische Wochenschrift.

A New Fever.—Zollenkopf describes a new disease which is like relapsing fever. It is characterized by a sudden onset of fever, occurring every 4 or 5 days, accompanied by pain in the neck and stiffness, pains in the spleen and liver, pains in the articulations and the calves. By straining in accordance with May-Grunbaum some red cells present very fine dots and rods. It is possible that this new clinical picture has some connection with cerebrospinal meningitis.—Deut Med. Woch.

Low Mortality Rate of Eclampsia in Scandinavian Countries.—According to Gammelhoft recent figures in Copenhagen give a mortality of less than 8 per cent. in 89 cases and in exactly 8 per cent. in 109 cases (rapid early delivery for severe cases, Stroganoff treatment for mild ones). A score of years ago the figures were much higher. A third obstetrician curettes the uterus after delivery and lost but three of his last thirty-four cases.—Correspondenz-Blatt fur Schweizer Aerzte.

Hysterical Mutism in a Boy.—A. J. Hall gives the detailed clinical history of a case in a boy, aged 11 years, in whom was illustrated the cumulative effect of repeated psychial shocks, at considerable intervals of time. It is well to bear in mind that the correct diagnosis of these cases, satisfactory as it may be to the medical man, does not always determine their cure. Such cases are most difficult to deal with and are very liable to relapse.—The British Journal of Diseases of Children.

The War Revenue Tax.

On another page of this issue the Dios Chemical Co. announce that the price of Neurosine, the Safe Soporific, will not be affected by the War Revenue Tax. All druggists will continue to supply Neurosine in 2 oz., 4 oz. and 8 oz. bottles at 25c, 50c and $1.00. The maintenance of these low prices in the face of a steadily advancing drug market is commendable. For the sake of economy, if for no other reason, every physician should acquaint himself with the usefulness of Neurosine, which has long been considered one of our most dependable hypnotic-sedative-antispasmodic remedies.

Wound Treatment by Cultures of a Spore Bearing Organism.—Donaldson and Joyce (London Lancet), present a preliminary report of their observations which have led up to a new method of treating infected wounds. It was observed that all of those wounds which were treated by means of the salt pack and which rapidly became clean and covered with healthy granulations were accompanied by a very foul odor, while those in which infection was not controlled did not emit this characteristic odor. Cultures from the odorous, favorably progressing wounds yielded an anaerobic bearing, proteolytic bacillus and those from the nonodorous wounds never grew this organism. Studies of the bacillus in vitro and in animals showed it to be markedly proteolytic and not pathogenic. Further, the products of its proteolysis were nontoxic to animals. Believing this organism to be the cause of the good results in the successful cases under salt packed treatment the authors made a series of carefully controlled observations on the treatment of wounds artificially sown with living cultures of this organism and were able to show that its growth in an infected wound led to the clearing up of the infection, the rapid digestion of all dead tissue, and the formation of abundant healthy granulations. This occurred in the absence of salt treatment as well as in its presence and corresponded to the clinical observations that the wounds which smelled and showed the organism were those which did well. From these studies it is suggested that infected wounds be promptly sown with the organism after all pockets have been laid open and the wound washed with sterile salt solution. The cavity should then be packed with sphagnum moss or salt pack gauze wrung out of salt or sterile water. When firmly and completely packed are sterilized. This usually effects a prompt cure.

Leuconychia, or Marble Nails.—Sabouraud (Presse Medicale) looks upon the white spots not infrequently noticed in the fingernails of adults and especially of children as a sign of definite prognostic value. It occurs almost exclusively in subjects whose blood pressure is below normal, and very commonly among neurasthenics and in pretuberculosis. It is met with at all ages, he having noted several instances in old patients with chronic alopecia. It is more common, however, in young girls and women than in any other type. In pessimistic young females who believe themselves unhappy and often develop phobias especially relating to loss of hair or eyelashes or to the growth of hair on the lip, the condition indicates a lasting nervous disturbance based on some as yet obscure organic lesion. Another class of young girls who frequently exhibit leuconychia is that of subjects with normal nervous system but with various skin disorders, such as recurring eczema of impetiginous type, persistent polymorphous acne, chronic eczema of the fingers, etc. These disorders are merely manifestations of a poor general condition which frequently ends in tuberculosis a few years later. At times, however, congenital syphilis or some other less distinct general disturbance underlies leuconychia. The latter is also an accompaniment of alopecia, especially that associated with general depression and asthenia, rebellious to both local and constitutional tonic medication. Leuconychia is a chronic, persistent condition, generally continuing for years, and its final disappearance is of favorable prognostic value. In the male sex it is less common and more significant than in the female, and occurs practically only in young pretuberculous subjects, in neurasthenics with phobias, and in old patients with alopecia. Any obscure, indefinite constitutional ailment should be looked upon as more serious if leuconychia coexists.

Phenolsulphonephthalein Investigation of Trench Nephritis.—Auld (British Medical Journal), studied the pthalein excretion in forty-two selected cases of young soldiers in the various stages of convalescence from acute trench nephritis. In the stage with abundant urine of generally low specific gravity and containing either much or little albumin with granular and hyaline casts the pthalein excretion was found to vary from twenty to fifty per cent. in the first hour. This variation bore no relation to the abundance of albumin or of casts, but the progress of the case was found to agree with the phthalein response, which, therefore, proved of great prognostic value early in the illness. A high excretion of the dye was never found in cases which ultimately did badly, all such cases having progressed favorably. During the first month the cases showed excretions from fifteen to fifty per cent. and those which had low excretion could be classified as to prognosis by subsequent tests only. Thus good recovery might be anticipated if the excretion had risen to forty per cent. in the first hour by the third month from the onset of the disease. Protracted recovery could be expected if the excretion remained under thirty per cent. at the end of the same period of time. Ultimate recovery was found to be the rule if the excretion rose to forty per cent. by the end of four months, but if it remained as low as fifteen to thirty per cent. at the end of that time the outlook was unfavorable without reference to the presence of albumin or casts. More than half the cases showed high excretion in the second month and of the remainder about equal numbers belonged to the third and fourth types. It was also found that an excretion under thirty per cent. indicated a milk and vegetable diet; at thirty to thirty-five per cent. fish might be added; and over thirty-five an ordinary diet with extra milk could be given with safety.

Mercury Salicylarsenate in Ophthalmic Therapeutics.—Terson (Paris Medical) from twelve years' experience with this compound, deems it more valuable than other soluble salts of mercury or arsenic in various complex ocular affections in which syphilis, generally congenital, is associated with dystrophic and chronic inflammatory processes, in particular tuberculosis in an attenuated form. In a three per cent. solution, put up in ampoules, the preparation is also known as enesol. Used freely twice a day for bathing the eye, the compound rapidly overcomes beginning infection of the cornea, even in the presence of hypopyon, providing dacryocystitis is not simultaneously present or is vigorously treated. When a wound of the cornea becomes yellow and is complicated by suppurative iritis, use of the compound will nearly always lead to recovery. In several instances panophthalmitis was prevented by it, and in multiple corneal wounds due to explosive war missiles its systematic use led to healing with a minimum of permanent injury. Conditions improved by the remedy include sluggish corneal ulcers, phagedenic ulcers, the transparent ulcer of senile subjects, chronic ceratitis, and affections of sclera and choroid, whether syphilitic or nonspecific. Applications of the solution as such or with glycerin, or of the medicament in a three per cent. ointment proved valuable in follicular affections of the lids as well as in furunculous, febrile, and parasitic disorders in these structures. Acute and chronic trachoma, phlyctenular conjunctivitis, and dacryocystitis were also benefited. The compound, being unirritating, is to mercury bichloride what argyrol in strong solution is to silver nitrate. Subconjunctival injections of a 1:500 or 1:1000 solution are feasible and efficacious. Use of the remedy locally in stomatitis, throat and nose inflammations, and in dermatology is also suggested.

Local Treatment of Meningococcus Carriers—Fildes and Wallis, in The London Lancet, made a series of investigations on a considerable number of meningococcus carriers under conditions of accurate control with a view to determining the relative value of the local antiseptics in curing the condition. They found that about one-third of the cases were cured immediately with no treatment or with only one or two applications of an antiseptic. Of those who remained carriers about half were cured, irrespective of the method employed, and no method seemed to have any material advantage over any other. No patient was regarded as cured until he gave four consecutive negative throat cultures at intervals of one week. Even among these a considerable proportion later relapsed. The antiseptics employed were five per cent. chloramine-T in steam, two per cent., in the form of a nasopharyngeal spray, and sprays of 1:500 acriflavine, 1:200 phenol, 1:200 formalin, 1:1,000 potassium permanganate, and 1:64 boric acid solution.

Surging Galvanic Current in Paralysis.—Cumberbatch, in The London Lancet, finds that if the galvanic current is applied to paralyzed muscles showing the reaction of degeneration in such a way that there is a more or less gradual increase of strength to a maximum and a similar progressive fall these muscles can be made to contract while the normal ones of the same part will not. This is a great advantage in that it provides a means of stimulating paralyzed muscles without at the same time damaging them by the stretching produced by the simultaneous contraction of their healthy antagonists. The method can be applied by means of electrodes applied over the muscles or in the form of local baths, but the current should always be made to pass through the affected muscles longitudinally. Its use has given good results in a number of cases in which it has been tried. The precise technic of application, as well as the construction of a simple and effective water rheostat for the control of the current, is described.

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THE MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA.

ITS WORK AND NEEDS.

By Benj. K. Hayes, M. D., Secretary, Oxford, N. C.

In a former article the various functions of a state medical society were stated. These functions may be summed up thus:

1. Social enjoyment.
2. Education.
3. Medical organization.

It is obvious that one and two are functions of all medical societies and that only three is a special function of a state organization. It is with this special function that we wish to deal at present. Under our plan of organization all business matters coming before the Society are dealt with by the House of Delegates. This body, as is well known, consists of one man from each county (a county is entitled to one delegate for every tfenty-five members), elected by his home county society. The officers of the State Society, including the president, three vice-presidents, secretary, treasurer and ten councilors, are also ex-officio members of the House of Delegates.

Council.

Before considering the work of the House of Delegates it is well to remember that there is a second official body in the Society known as the Council. The Council consists of ten members, one from each "councilor district." These councilors, are individually, pastors of the flock. They keep an eye upon the work of the county societies in their respective districts. "Each councilor shall be organizer, peacemaker and censor for his district." Collectively, the Council is the supreme court of the Society. All matters of an ethical nature "shall be referred to the Council without discussion," and, "its decision in all such cases shall be final." It would be well for us to stop here and get this function of the Council fixed in our minds. Ethical matters cannot be discussed in the open meeting. They cannot be discussed in the House of Delegates. They must go before the Council. The ruling of the Council is final. There is no appeal nor can the action of the Council be brought up for discussion either in open session or before the House of Delegates. The Council can meet when and where it chooses and when it speaks its utterance is the last word upon all ethical matters.

House of Delegates.

Now let us return to the House of Delegates. This body deals with business and with organization. The question of whether members of the Society who are not members of the House of Delegates have the privileges of the floor in that body does not seem to have arisen. Apparently they have not.

It has always been a problem how to find time for the meeting of the House of Delegates without interfering with the general meeting. If the House of Delegates is in session while one or more general meetings are in session it is a very difficult matter to provide reporters to take down the proceedings of all the meetings. Moreover, the members of the House of Delegates are interested in the work of the general meetings while every member of the Society is, or should be, interested in the work of the House of Delegates. To meet this difficulty it would be well for the House of Delegates to meet at nine o'clock each morning during the session of the Society and that meeting should be in the general assembly room. On the first morning the House would be organized, the members of the Nominating Committee elected and the reports of the councilors and also the reports from the district and county societies heard. The House of Delegates would adjourn at ten o'clock and the regular session would be called to order.

On the second morning the routine work of the House of Delegates should be taken up. This would not require more than thirty minutes. The general session could then be called at nine-thirty. On the third morning the Nominating Committee would make its report and the business affairs of the Society for that session closed. In this way every member of the Society could attend the meetings of the House of Delegates. Only members of that body would take part in its proceedings and things which do not pertain to the House of Delegates would not be discussed there. Individual county societies would appreciate the necessity of electing only men of a constructive turn of mind to this important body, remembering that one obstructionist can do more harm than twenty sane men can do good. Each member of the House of Delegates should make a report (not to exceed two minutes) of the work in his county society and these reports should be published in the Transactions. These reports should be heard by every member of the Society. Nothing could be more inspiring or helpful to the individual county societies than for the members to hear just what is being done and how the work is conducted in other societies.

Medical Legislation.

It is well known that medical legislation is often a matter of the greatest importance not only to the Society as a whole but to every individual physician in the State. When matters of legislation are brought before the House of Delegates they are referred to the Legislative Committee and that is an end of it. This should not be so. The matter upon which legislation is being considered should be freely discussed with every member of the Society present. When it is determined that certain legislation is desirable, just and reasonable, each member of the Society should return to his home with the firm determination to work to secure such legislation. To secure their needs medical men should use their influence upon their home candidates for the legislature and the candidate should be approached before he receives his nomination. The average member of the legislature does not know anything about the need of public health laws and he does not care. But he does care when he finds that six country doctors are riding up and down his county working for his defeat or election. Under our present plan of operation demagogues make political capital of abusing the medical profession, knowing full well that such abuse will not cost them one single vote. Had the medical men in North Carolina stood together, the bill advocated by Dr. W. S. Rankin before the last legislature, forbidding the sale of secret remedies in the State, would now be law. The medical men who have the care of our institutions for the insane, the tubercular and the blind should be made to feel that the Medical Society is the place where they can secure aid in getting the necessary appropriations to carry on their work.

Reduced Rates on Railways.

Reduced railway fares to and from the meetings are offered by the Railway Commissioner provided as many as two hundred members avail themselves of the reduction. Dr. John Ferrell asked for the reduction for the Raleigh meeting in 1914. This was one of the largest meetings in the history of the Society and yet only one hundred and forty-six members applied for the reduced rate. A reduced rate was again asked for last year and a still smaller number applied for it. To complicate matters the agent at Asheville made the statement that he would honor the limited number of reduced rate tickets if the secretary would collect all of them from the members, take them to the station and sign them in his presence and then return them to the members. This was obviously impossible. Some of the men had gone while others were scattered over and around Asheville.

One reason why so few men apply for the reduced rate is because many of them are railway surgeons and travel upon passes. Others do not want return tickets while most of them come from small stations where the agents do not seem to have instructions.

Under the present rules of the Railway Commission it seems useless to try to get reduced rates to and from the meetings.

The General Session.

To complete the work of the general session it is absolutely necessary that at least two sections should be running through the entire session. On the second day when the Eye, Ear, Nose and Throat men are in session it is necessary to have three sections. The arrangement of these sections is a matter of difficulty, based upon the facts, first, that each man present would like to hear every paper read and, second, that the majority of the men will not remain at the meeting through the third day.

During the first two days the problem is partly solved by virtue of the fact that one set of men are interested in internal medicine, diseases of children and public health while a second set of men are interested in surgery and gynecology. When this much of the program is completed the surgeon's interest in the meeting is at an end. He is ready to go home. But the program is only half completed.

Other important sections are yet to be called. How can they be made of interest? How can the members of the Society be induced to remain and hear and discuss these papers. This problem has not yet been solved. But there are certain things which can be done that will help to solve it. Let us consider them:

(1) The time limit upon all papers is twenty minutes. The time limit upon the discussions is five minutes and no man has the privileges of the floor but once in the discussion of a given paper. This time limit is fixed by the by-laws. There is no provision made for extending the time and all motions to that effect are out of order. The writers of papers know of this law and it is not asking too much that each writer should know before he comes to the meeting that his paper can be read in twenty minutes.

(2) When possible papers upon kindred subjects should be grouped into symposia, and each symposium should be discussed as a whole.

(3) The names of men to open the discussions of the papers have been introduced upon the program for many reasons: (a) It insures an intelligent discussion of every paper; (b) by a man who has posted himself upon the subject; (c) it brings out the opinions of men who through modesty or diffidence would often refrain from taking a part in the discussions, and (d) by not using any one man's name upon the program more than once to open a discussion (and by not using the name of any man who reads a paper at that meeting) the discussions become more general. To express it with brutal frankness, a few men are not permitted to do all the talking.

(4) Many of the best papers are called for the last day of the meeting. By studying the program before coming to the meeting members would find that the very papers in which they are most interested would be called upon Thursday. They should, therefore, make their plans to be present to hear and discuss these papers.

Individual Obligations.

Let it be remembered that the North Carolina Medical Society is an organization with both a history and a purpose. Its achievements in the past have been such that it is an honor to any man to be a member of such a body. Its records will be studied ages hence and all that will be known of you and of me a hundred years from now will be the reports of our efforts as recorded in its Transactions.

Under its democratic plan of organization every man stands upon an equal footing. The ex-president and the man who joined but yesterday contend doubtfully in debate. The relative influence of any two men is not due to a difference in position or in caste but to a difference in age, experience, judgment and character. We are rather fortunate that we have in our Society no men of great genius or world wide reputation. No man has attained to more than the humblest member may hope to attain. And the Society has a purpose which grows almost into a religion when one thinks upon its possibilities for good. In its work in the interest of public health, in its education of the people in matters of sanitation, in its elimination of the ignorant, the quack and the charlatan from the ranks of the profession, in its stimulation of its members to do better and more conscientious work the Medical Society stands second only to the church in its uplifting influence upon the State.

Such an organization can achieve its highest aims only by a cultivation of the spirit of unity; a willingness to give and take on the part of individual members in the petty bickerings which, from time to time, must inevitably arise. The great power of the American nation has become a unit against a foreign foe. In the same spirit may we not maintain the Medical Society as a unit in its common aim—the alleviation of human suffering and the prevention of premature death.

A BRIEF STUDY IN DIAGNOSIS AND TREATMENT OF APPENDICITIS IN THE CHINESE. EIGHT CASES REPORT TYPICAL OF SERIES.

By W. B. Russell, B. S., M. D., Soochow Hospital, Soochow, China.

In again bringing the subject of appendicitis before this association I feel that I must crave your indulgence for I am convinced not only that this disease is not infrequently the unknown cause of death in the Chinese but also that it is the most frequent source of inflammation, peritonitis, in the Chinese abdomen. Thirty-nine cases were referred to my service in the Soochow Hospital for treatment during the seventeen months from May, 1915, to October, 1916. Four of these patients refused operation so were treated after the method of Dr.

Ochner as far as possible and all recovered from the attack. Of the thirty-five operated, two died. One of these a little slave girl of a Chinese native practitioner, uncle of one of our nurses. Hospital Case No. 169, female, age 13, entered hospital February 25, 1916, with symptoms of generalized peritonitis; pulse 160; temperature 104½; typical drawn facies, greatly distended and very tender abdomen, etc. I told them there was not one chance in one thousand for her but our nurse said his uncle had sent her for operation and he must be censured by his uncle if we did not operate. They gave clear cut Murphy symptomatic history of appendicitis beginning 12 days before coming to hospital. We opened abdomen at McBurney's point when grayish purrulent fluid began to flow out. Appendix was found distended, indurated and angry but not ruptured removed by ordinary purse string procedure and wound drained with three large drainage tubes, one in pulvis, one to base of appendix stump, etc. Pus was examined at once and an apparently pure culture of streptococci found. Patient in bed shock enema given, then a dose of antistreptociccic serum and patient put up in Fowler's position and the continuous proctolysis of saline started but patient died the following day. The appendix showed grossly every sign of being the cause of the trouble but I take it the streptococci passed out through walls of appendix without rupture and large amounts of carthartic had been given completed the etiology. The other case of death is reported below.

The course of the disease in the Chinese in mild cases is usually toward recovery but is always uncertain and our case histories show a very large percentage of recurrences with increasing violence with each succeeding attack. Cases of so called appendiceal colic, i. e., griping pain near McBurney's point periodically with vomiting or nausea but no fever, have not come in on our service but apparently have been encountered in our out patient department. Two of our cases came with old fecal fistulae near McBurney's point with histories which led us to think trouble originated in appendix which was confirmed at operation in both cases and both case cured. One of these we report below. We have had occasion to remove the appendix in a number of cases in the course of other operations in abdomen when it was found to be what we call a chronic appendix and it has been rare in these cases not to find either a history of acute attacks in past or of chronic indigestion and vague right side trouble. We now know from examinations with the bismuth meal and X-ray that in cases of acute appendicitis there is a spasmotic closure of the ileo-cecal valve and often a reverse peristalsis and especially if food is taken nausea and vomiting ensue. This result of sympathetic excitation in appendicitis is nature's effort to protect the affected part and if left alone or assisted as in Ochner's method of preparatory treatment may succeed in completely walling off the organ and in case of rupture complete the walls of the circumscribed abscess. This explains why we should not give cathartics and by forced peristalsis in the small intestine not only prevent nature from forming adhesions and walling off the appendix in case of rupture and possibly general peritonitis. Some observers would lead us to think that appendicitis may be frequent in foreigners who are great meat eaters but rare in the Chinese because they seem as a rule to eat little meat but on the other hand quite a number of our cases have been in those who take little or no meat. In our small series all classes practically in China have been represented, both the learned and the unlearned as well as both vegetarians and non-vegetarians. Nearly all of our cases have been infected with intestinal parasites and in one case not included in this series, which we reported to the Shanghai Branch of the C. M. M. A. where the appendix was found distended and apparently indurated and showing some congestion was removed in the course of operation for removal of a large ovarian cyst and after removal a round worm crawled out of appendix while lying in the pus basin. In my former paper before this association we suggested intestinal parasites as one of the etiological factors in appendicitis in the Chinese. Only a few days ago we found Dr. A. W. Armstrong in the New York State Medical Journal for September, 1916, reporting four cases of appendicitis in American children with intestinal parasites and he says in each case appendicitis was "found directly by the parasites." In our part of China approximately 70 per cent. of the people have been shown by routine fecal examinations in our laboratory to be infected with one or more varieties of intestinal parasites so following Dr. Armstrong by analogy we should expect in the Chinese to find an abundance of appendicitis. Fundamentally, we have found appendi-

citis the same in the Chinese as in foreigners. Some time ago the editor of our China Medical Journal wrote us in regard to this phase of the disease and said he had just heard a case report of appendicitis in a Chinese patient without a single Murphy symptom. I have since receiving this letter observed more carefully the symptoms in these cases and must say no such cases have been referred to me nor have I seen such but am sure I could not make a diagnosis if I did so, perhaps, my observation had not better be considered in any sense final in this matter. We have more often noticed the absence of vomiting and accounted for it by the fact that the Chinese are sensible enough to take little or no food, in our cases. When asked if this disease was more frequent in the Chinese than formerly we of course said, we did not know but thought conditions were at least as favorable as they were 3,000 years ago and perhaps appendicitis about as frequent. Our cases as a rule have presented pain, nausea or vomiting, tenderness over or in region of McBurney's point and fever and usually has been so clear that a lucecyte count has rarely been thought of or at least found necessary to confirm diagnosis. We feel we at least, would like to add our little mite as a tribute to the memory of our late Dr. John B. Murphy by saying that it is my judgment that his observations in this disease are fundamental and not limited by race or at least by the Chinese race. **Recognizing appendicitis as a surgical disease** and that the Chinese as a rule rarely submit to interval operation, we operate as soon as practicable after definite diagnosis is made. In acute cases we usually employ the McBurney muscle splitting incision and when necessary bring drain out through wound which is closed with interrupted sutures by the layer method.

In all cases diagnosed in the first 24 hours of the disease we insist on immediate operation. We wish to condemn most emphatically the giving of opium for relief in these cases especially before a definite diagnosis is made. After time has elapsed so that we can be sure the infection has already passed beyond the walls of the appendix we may consider Ochner treatment but we believe that in the Chinese it is as a rule wiser to operate at once being careful to do as little traumatism as possible drain in all cases of doubt and in these cases follow out the principles of the Ochner treatment after operation. By this we mean Fowler's position, opium to control peristalsis, normal saline procto-clysis following usual shock enema, normal saline intravenously on table if necessary, rectal feedings, wash out stomach and give nothing by mouth until active inflammation is controlled. Try to meet nature's indications.

Many cases come to us in our out clinic work who give a history of undoubted repeated acute attacks and still others who may be called right sided cases possibly also indications of gall bladder or pyloric or stomach ulcer or in female may be in tube, ovary, etc. These are cases for careful study with interval operation in view. In these cases of interval operation or exploration we prefer the right rectus incision. We now desire to first report a case of interim operation followed by seven other case reports as near as possible typical of cases in the Chinese who have come under our treatment here.. Case No. 1, hospital No. 1380; male, age 43; teacher. Entered hospital September 11, 1916, on my service for the purpose of having interval operation for appendicitis following day. Two years ago he had had an attack just like the one he had two months ago when he applied to writer for treatment. This attack began about 18 hours before I saw him with pain diffused at first, vomiting, pain of griping nature in appendiceal region at that time very tender on the least pressure and temperature 100. On operation being urged patient refused absolutely so was urged to be careful and in case he got over thi sattack come back for interval operation. At home after thinking over the possibility and danger of another attack he wrote us a letter about it and we had a letter written to him urging operation so he much to my surprise came and submitted. At operation, McBurney incision, omentum appeared in wound but on being pushed aside appendix was easily found by tracing line to head of cecum and was removed by ordinary purse string suture. Appendix showed some induration and slight adhesions near distal end. His indigestion and other symptoms have cleared up since leaving the hospital after an uneventful convalescence. Case No. 2, hospital No. 1653; age 24; University student; athlete. Entered hospital December 27, 1917, with diagnosis of appendicitis. Patient said he had had two attacks before the present one, first October, 1914, with pain griping in character near McBurney's point, nausea and vomiting and some fever. Second attack November, 1915, same as first. Present attack came on morning of day before operation. At operation under chloroform, McBurney's incision, appendix found inflamed, indurated and not draining itself. Removed by ordinary purse string procedure and wound closed by layer method with drainage. After-treatment uneventful. Patient discharged January 7, 1916, tenth day after operation cured. Patient was in field sports in spring and has been captain of football team this fall, and has had not the least trouble since operation. Case No. 3, hospital No. 254; soldier; age 25; entered hospital March 10, 1916, on medical service. After careful examination Dr. Lee diagnosed the case appendicitis, refused treatment and turned the patient over to my service when I examined him and got following history. Attack began February 24, 1916, with pain in abdomen and vomiting and three days without a bowel movement, so Chinese doctor was called and gave him a cathartic which moved his bowels. Says pain continued and became localized to McBurney's point on March 1, 1916, and he felt feverish, followed by sweating. Operation March 14, 1916, McBurney incision, found considerable quantity of very thick pus which was examined at once by Dr. Lee and many staphylococci reported. Appendix had sloughed off. Remains of stump of same was found tied and closed off and wound closed by layer method large drainage tube having been brought out through wound. After treatment Fowler's position, continuous modified Murphy, etc. Patient discharged April 11, 1916, cured.

Case No. 4, hospital No. 17; male, age 21, University student. Entered hospital January 4, 1916, about 3:30 p. m., diagnosis of appendicitis having been made by Dr. Park from history given by his class-mate and sent stretcher for him at once as Dr. Park was off for an out call. It was my major clinic afternoon so I was operating but went out between operations to see him in private room when he said, "I never had an attack like this before." This began December 23, 1915, at 4.00 p. m. with severe griping pain in abdomen, with nausea but no vomiting but had taken no food for several days save little Chinese sweet meats when very hungry and seemed to get some relief from the pain in this way. Says griping pain grew very bad at four distinct intervals before he came to hospital but that during the whole time was not quite comfortable in his abdomen. On rising morning of January 4, 1916, felt very hungry so decided to take a little breakfast after which he grew worse but went to chapel at 7.40 and after chael went to his first class when pain became so severe he had to get excused and go to his room, when he sent for the school doctor who prescribed turpentine stupe for abdomen with no relief so early in the afternoon he got his room-mate to come for Dr. Park. As I had seen him and gone over history I told him operation would be dangerous but not to operate would in my judgment be more so. I ordered soap suds-turpentine enema and left matter for him and his sister who was with him to decide. A little later sister sent word to operate so I put him at foot of list. At operation large McBurney incision, grayish fluid came out as we entered peritoneal cavity. Intestines were greatly distended which made search for appendix difficult but it was finally found a little above level of umbilious, deeply situated and almost to midline and slightly adherent. On being delivered it showed signs of beginning ulceration was very large and congested. Removed by ordinary purse string operation and wound closed by layer method a large cigarette drain being brought out through center of same. Patient received 600 c. c. of normal saline intravenously on table and 500 c. c. routine shock normal saline started four hours later. Five-hour rectal feedings were started few hours later with continuous saline in intraval and kept up for five days with patient in Fowler's position. Temperature went to 102.8 but came down to normal on fourth day so strained liquids were begun by mouth. Patient did not receive one dose of medicine by mouth while in hospital. Bowels moved well third day. Patient improved rapidly after fourth day, drainage tube removed on sixth day and was discharged eleventh day; took part in spring athletics including field day. Graduated with his class from the Soochow University in June.

Case No. 5, hospital No. 1531; male, age 19; clerk; entered hospital December 2, 1915, from Dr. Park's special clinic with diagnosis of appendicitis. Patient eleven days before entrance took with pain in region of stomach, later becoming localized at McBurney's point where a tender dull mass was found on examination. Was no history of vomiting but nausea and they said patient had taken no food for five or six days, during which time bowels had not moved but urine was very red. Patient was put up in Fowler's position given soap suds enema which returned with large stool when rectal feedings and continuous saline were started but nothing by mouth. On following day at operation, McBurney's incision, firm adhesions were encountered. Abscess was found external and posterior to head of cecum and ascending colon but as appendix had not been located one drain was put into abscess cavity and one into pulvis and wound closed by layer method. On third morning some feces seemed to be coming from wound. On second day patient presented swelling in region of left parotid gland. Mumps was thought of. Three days later right parotid was swollen and tender. Left side showed signs of pus so was opened and only staphylococci found in the pus, and a little later similarly for right side. Patient had some tonsilitis preceding appendicitis. This patient received intravenous of normal saline on table and rectal feedings alternating with continuous saline, Fowler's position, etc., after operation which was a slow convalescence the details of which would be too tedious. Suffice it to say fecal fistula and all wounds healed and patient was dismissed March 1, 1916, fat and well.

Case No. 6, hospital No. 1260; male, age 14; farmer's son. Entered hospital August 30, 1916. Family history negative. Had an attack just like this one except not so severe eight months before entering hospital with severe pain first in stomach later became localized to McBurney's point with vomiting and fever. On entrance pulse was 90 and temperature 100.8 at 5.50 p. m. Soap suds enema was given and feces showed heavy infection of ascaris lumbricoides so oil of chenopodium m. 15 was given followed by one ounce of epsom salts in one hour. Writer arrived from Kiukiang August 31st and operated under chloroform that p. m. McBurney incision. Abscess just posterior to head of cecum contained pus, a fecelith and remains of ruptured appendix which was removed and wound closed with drain. Writer ordered Fowler's position, continuous saline and rectal feeding for this patient but as he happened to be single handed at that time, and from 60 miles in country and an urgent call came so did not see patient for 26 hours after operation when it was discovered he had gotten all except the Fowler's position. Was put up at once but temperature was then 102.2 and pulse 125 and generalized peritonitis already begun. Everything was done, continuous saline, etc., but patient died September 3rd of generalized peritonitis. Temperature one hour and a half before death 2.00 a. m. was 105.6 and pulse 160. I believe Fowler's position with other measures used right might have spelled cure.

Case No. 7, hospital No. 408, female; married seven years; one child. Patient entered hospital April 11, 1916, on Dr. Lee's service to break off opium and was signed up for 25 days' treatment. She, however, complained of so much pain in abdomen Dr. Lee called me in consultation. We found heavy leucorrheal discharge with pain in right lower quadrant of abdomen and suggested abdominal exploratory. Husband, a teacher in government schol in another city, was sent for and consented to operation. At operation, low median incision; tubes apparently normal; uterus retroverted but normal in size, etc.; ovaries both cystic so were resected, appendix was found large, indurated and congested so was removed. Patient had a quiet and comparatively uneventful convalescence and was discharged May 27, 1916, 46 days after entrance and 29 after operation cured to her own satisfaction.

Case just reported reminds me of another young married woman of good family wife of a splendid young man, Christian, well educated, etc. They thought the wife had appendicitis as they said one of the foreign missionary ladies had it and we operated and they were sure hers was the same. I went over history and assured them it was not a clear cut case of appendicitis. They insisted on operation when I made incision as above found right pus tube with broad ligament infiltration, right ovary cystic and appendix adherent to fimbriated extremity of tube and inflamed so all were relieved. This trouble apparently originated in a mild gonorrhea 15 years before marriage, one year ago in husband for I could find no other cause, so I take this opportunity to ask if others may know of or have had such a case.

Case No. 8, hospital No. 1361; male, age 34; farmer. Entered hospital September 9, 1917, with foul fecal fistula of abdomen, opening found just below McBurney's point. History indefinite save that about a year ago patient had an attack of pain in right side and a lump formed in appendiceal region which he got Chinese doctor to open with a knife when pus and some blood came away and later a large part of his feces came through opening containing same to date of instance. Patient was poorly nourished on entranc so a few days were taken to get him in better condition for operation. Patient was very impatient, for operation; under chloroform abdomen was opened just to right of mid-line as agreed with patient and a possible second operation with incision external to fistula opening promised in case this failed. Abdomen opened as above and small intestine traced to fistula opening and two sections of bowel were found to open into fistula one full and other flat, contracted and empty so lateral anastomisis was made between these two coils and wound closed without drainage. Patient did well after this operation and fistula almost closed but then failed to improve so November 14, 1916, Dr. Snell and I went in externally and began the solution of this Chinese puzzle which we finally found to be due to an old ruptured appendix due to appendicitis with rupture and abscess formation and opening by Chinese doctor completed the etiology. We found remains of half or approximately so of the appendix which was firmly held in wall of fistulous tract with distal end sloughed away and two openings as found in former operation were confirmed freed and closed and appendix stump removed and wound closed with drain. Anastomosis made at former operation was inspected and was discharged December 13, 1916, cured.

In concluding, we feel we have given you as near as we could typical cases of appendicitis in the Chinese as they have been referred to our service in the Soochow Hospital. We might have studied our cases with a great deal more profit both to myself and to you but we give them to you as they are. We shall appreciate your free discussion of this subject and urge that all abdominal cases shall have careful examination and investigation to include a carefully taken history and in acute attacks a leucocyte count if necessary to diagnosis.

Presented at the Canton meeting of the joint session of National Medical Association of China and the China Medical Missionary Association February, 1917.

To Enlarge Naval Hospitals.—Plans for enlarging naval hospitals at Norfolk, Va.; Great Lakes, Ill., and those at the American naval bases in Great Britain and France have been completed by Surgeon General Braisted. The foreign hospitals are to be doubled—that in England The capacity will be based on a sick rate of five per cent.

A PLEA FOR CLOSER ATTENTION TO SYMPATHETIC IRRIGATIONS IN THE PRACTICE O FMEDICINE.*

By J. H. Hiden, M. D., Pungoteague, Va.

In the practice of medicine we often use medical expressions which stand for whole systems of thought. Indeed, a mere phrase of some pathological condition may call forth a very broad and deep knowledge of medical science to acquire any accurate and comprehensive view of the subject in question. It is said that upon one occasion Dr. William Osler in showing a class of students some various clinical phenomena of syphilitic cases said: "Gentlemen, you see now when you know syphilis, you know the practice of medicine." This statement will lose much of its extravagance when we catch a comprehensive view of this disease and see its work, both active and latent, in all the anatomical structures of the body in which the nervous system itself is not allowed to escape. In like manner I may say when we have learned the disorders of the human body due to sympathetic irritations of distant structures we have mastered a large part of the science of medicine. Indeed, the subject is so broad and many-sided that an accurate, comprehensive knowledge of it would require us to learn thousands of things which would appear, at first sight, alien to the subject in question. And this is necessarily true owing to the peculiar relationship which exists between the anatomical tissues and organs of the human body.

Now this subject of distant sympathetic irritations as etiological factors in the causation of morbid conditions may be naturally divided into the **physical** and the **psychological**, yet this distinction is not always clear and well-defined. For instance, here is a patient who is suffering with profound grief when the causative factors are such as to call forth emotions of indignation and anger also. The nervous system is so disturbed that the normal blood-supply to the stomach is more or less altered, interfering with normal digestion. We have then before us deficiency in gastric juice, fermentation, food decomposition, putrifaction, toxic absorption and disturbed metabolism—often-times accompanied with more or less cardiac irritability—all of which in turn react upon the already disturbed nervous system, forming a vicious circle of the physical and the psychological forces in the development of this distressing condition. We have all seen this picture. And it presents only a common type of a vicious circle which often enters into the formation of many of our most perplexing cases—victims of sympathetic irritation. And so in presenting this subject I will ignore the suggested classification and call your attention to only such irritations as are productive of symptoms and morbid conditions which appear alien to the organs or structures involved. Every physician becomes apprehensive of sympathetic inflammation of an eye whenever there is severe inflammation of the opposite eye. The same is true in regard to like sympathies in the symptoms of aching teeth, or of many other adjacent structures; but when pathological disturbances in the multipolar cells of the anterior horn of the spinal cord are diagnosed by the condition of a child's foot, it requires a little more extensive knowledge of medicine. And this knowledge of medicine must increase as we continue to apply this principle to many remote troubles of more complex origin. Indeed, our problems along this line are very numerous and often-times they become so complicated and so complex that we are compelled to resort to simpler measures in diagnosis, such as the use of the microscope, the X-ray, the Wassermann test or the blood count in an effort to find a solution. And when all these fail, as they often do, we are again confronted with the same intricate problem to be solved by human sagacity alone. Under such conditions it is often well for the physician to look for sympathetic irritations from distant organs and structures before resigning the case in despair. Moreover, this thought should ever be kept before him, and as he develops the capacity to seize for consideration the cardinal symptoms in any given case, eliminating those that only tend to obscure the real nature of the trouble, he will often find his efforts crowned with success. And each success of this kind will sharpen his insight for the solution of even graver problems of a similar character.

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*Read before the Seaboard Medical Association at Norfolk, Va., December 6, 1917.

Now Iam fully aware that the tendency of our age is to ignore this broad, laborious work for what is regarded as more accurate measures within narrower limits, and while I do not wish to depreciate these latter procedures, yet I wish to emphasize that an undue reliance upon these may often cause us to lose sight of one of the most important studies in the practice of medicine, namely, that involving the sympathetic relations of the vital organs of the body. The heart specialist cannot afford to lose sight of the functionating properties of the thyroid gland, nor can the neurologist ignore the action of the secretion of the corpus luteum. The relations of these structures in each case might become too vital. In a word, a broad, comprehensive view of the entire organs of the body may be required in a given case before we can place a proper valuation upon the symptoms which we find. And this thought of estimating the value of any group of symptoms in forming a diagnosis or in deciding the prognosis of a case is after all the most essential feature of a physician's work. And the more we give our attention to this phase of study the more we will be impressed with the frequency of sympathetic irritations of distant structures as etiological factors in the causation of disease.

Now in illustrating the truth of these remarks I wish to call your attention to some interesting cases which have appeared in my own practice.

Case 1.—A little girl 12 years of age who had contracted whooping cough. This was soon followed with broncho-pneumonia with a temperature 104.5 Ft., pulse, 150 to the minute, respirations in fresh air 78 to the minute and labored. At this stage in the case the entire abdomen swelled tense and became painful and tender, giving the appearance of severe peritonitis. This alarming condition remained for several days, and the case was treated from strictly a medical standpoint, believing and trusting that these symptoms of apparent peritonitis were only those of sympathetic abdomiual irritation, which Dr. J. T. M. Finny of the Johns Hopkins University has so brilliantly described as occasionally accompanying pneumonia in children. Within about a week the violence of this disease was expended, and as the symptoms of pneumonia improved, the abdominal irritation quickly subsided also, and the patient soon made an excellent recovery. Moreover, the complete absence of all abdominal symptoms since only tends to confirm the belief in the correctness of the diagnosis. It is hardly necessary to say that a failure to recognize these abdominal symptoms as those of sympathetic irritation, under such conditions, might have led to a grave error indeed.

Case 2.—Another case of sympathetic irritation of special interest was one of uterine reflex laryngitis and pharyngitis. The patient was a married woman about 35 years of age and had been in delicate health for several years. She complained of a weak, dragging pain in the back, but more discomfort with her throat. This was of a burning character, and at times, it assumed a choking sensation with a feeling o fsuffocation. Examination of her pharynx revealed only a peculiar unhealthy appearance of the mucus membrane such as Dr. Carl Seiler has described as uterine reflex laryngitis when, in the year of 1893, he made the startling statement that he could easily diagnose uterine disease by a peculiar unhealthy appearance of the mucus membrane of the larynx and pharynx of such patients. And in this case when I gave as my opinion that the throat symptoms were the result of sympathetic irritation of uterine origin, the statement was regarded by the patient as absolutely absurd. I was also informed that, in view of such an absurdity, my services were no longer desired. She left my office and went to Baltimore in search of "more rational" aid, appealing to a number of physicians without receiving any relief. Within about two months she returned to me, insisting that "if I didn't do something to relieve the trouble in her throat, she would lose her mind." It is sufficient to say that I made an appointment for an uterine examination, and found upon this examination an enlarged, retroverted uterus with an old chronic endometritis. The uterus was immediately replaced and the endometrium treated, and to my delight, not only were the symptoms of backache removed, but the throat discomfort disappeared almost like magic without any further treatment. And the success of the uterine treatment viewed from every standpoint, was gratifying indeed.

Case 3.—Another case of sympathetic irritation occurred about 18 months ago in a highly cultivated physician. He was about 73 years of age, yet quite active as Professor of modern languages in one of our best institutions of learning. He had been suffering with an obstinate spell of indigestion for some weeks without being able to get any permanent relief. As soon as he would eat any sort of food there would accumulate a great deal of gas and this would collect mostly upon the right side just under the liver, giving him much pain and distress. Quite a variety of remedies had been tried, such as laxatives, liver pills of various kinds, calomel, pepsin, hydrochloric acid, soda mints, creosote, charcoal compounds and the like, also enemas for his bowels, special dietetic observances and spells of starvation—all with little or no signs of improvement. At last when he thought his condition was some incurable disease of the liver the case was put into my hands. When I stated to him that I regarded his case as easily curable, and that the trouble with his stomach, and digestive tract was not the primary trouble, but only secondary to a disturbance of the nervous system which was more or less depressed, causing deficiency in gastric juice, constipation, gas accumulation, etc. ,and that small doses of strychnine 3 'times a day were indicated to tone up the nervous system, stimulate intestinal peristalsis, increase the blood-supply to the stomach, thus favoring the processes of digestion, he was skeptical indeed. This view of his case seemed too simple and common-place. For the want of something better, however, it was adopted. And it is sufficient to say that the adoption of this course was followed with a rapid, complete recovery, and that this surprised physician soon admitted that 1-60 of a grain of strychnine taken 3 times a day had corrected every morbid symptom and had restored him to perfect health. Moreover, he has also admitted that whenever he omits the taking of this tonic he soon experiences a tendency to constipation, gas accumulation and digestive disturbances, and that a return to the tonic is immediately followed with improvement as before.

I mention this simple case to emphasize the intimate relationship of the nervous system with the entire digestive tract, which is so often over-looked, as it was in this case, by the most cultivated physicians themselves when they are looking for morbid conditions of graver import.

In my appeal for a broader study of the sympathetic relations of the organs and structures o fthe body as etiological factors in the causation of innumerable morbid conditions, I wish to say that with more earnest study in this line we would probably relieve a larger number of patients afflicted with a tendency to epilepsy. (b) we would have fewer cases diagnosed as rheumatism when the primary trouble might be in the spinal cord, the tonsils, defective teeth, pyorrhoea, gonorrhoea, or syphilitic or of tuberculous origin from distant structures or organs of the body. (c) There would be fewer cases diagnosed as gastritis when the trouble is that of gall-stones, or appendicitis, ovaritis, endometritis, uterine displacement, or pregnancy, etc. (d) There would be fewer diagoses of cardiac disease when the real trouble is in the nervous system, the thyroid gland, the digestive tract, or perhaps of tuberculous or of renal origin. (e) There would be fewer diagnoses of neurasthenia when the trouble is cardiac weakness, or in some disorder of the pelvic organs, especially the uterus, bladder or rectum. (f) There would be fewer cases diagnosed as malaria or tuberculosis when the chills and "night sweats" can be accounted for by the absorption of pus from some distant organ or structure of the body. (g) There would be fewer cases treated for headache, neuralgia, migrane when the trouble is with the eyes, stomach, kidneys, blood-pressure, or heart-action. And I might go on almost indefinitely in multiplying evidences along this line for the need of greater efficiency in recognizing the frequency in which sympathetic irritation from distant organs and structures of the body play as etiological factors in the causation of morbid conditions and diseases of mankind. And in conclusion whatever might be our special fondness for some particular phases of medical study, as general practitioners, let us ever cultivate this broad field of study that we may make ourselves more efficient in relieving the sufferings of our fellow men.

WHEN SHALL FRACTURES BE RADIOGRAPHED?

By Charles Dalton Cleghorn, M. D., Macon, Ga.

I believe the day has come, when no special arguments must be made to the surgeons in any intelligent community, or to the surgeons of skill in any community, urging upon them the necessity for a thorough Roentgenologic examination in every case of fracture. This procedure has become the recognized form of examination throughout the civilized world, and, unless there is no way in which one can be procured, the surgeon who treats a fracture without the aid of the Roentgen Ray, is deemed by his fellow practitioners, and held under the law, to have been remiss.

The question regarding the proper procedure when bone or joint injury is possible, but not apparent, is still being debated. Dr. Newell gives much information on the subject in a few words, when he says, "We have insisted, during the past eight years on a thorough X-Ray examination in all cases of traumatism of sufficient, or possibly sufficient force, to cause injury to bones or joints, and we have been amazed at times, over the information obtained thereby. Cases in which the injuries were apparently superficial, where the trauma was not considered adequate to cause more than a local flesh wound, have been definitely shown to present serious bone lesions; in other cases where the patient was profoundly shocked, the apparent traumatism great and the impact violence sufficient to produce many fractures, the Roentgenographic examination has proved that there were no fractures."

It would be a simple matter for any Roentgenologist, of even a limited practice and short time devoted to the work, to quote from his records numerous cases to show this experience of Dr. Newell's to be the inevitable one. So before too long a time, I trust we will see all cases of possible bone or joint injury examined in this most rational manner.

As this time has not yet come, we may leave out of our discussion therefore, those cases in which the presence or absence of a fracture is so much in doubt without the Roentgen examination, and consider for a few minutes the question which forms the title to this paper, namely, when shall fractures be radiographed? This takes for granted that in the cases in question we are sure, or reasonably sure, that a fracture exists.

There are those who say, and who carry out in their work the advice, 'always wait until a fracture has been replaced in as good position as seems possible before submitting the patient to the ray.' They base this advice on the argument that if the reduction is good, bone and joint structures apearing in normal contour, the work is done. If further manipulation is shown to be needed, then nothing has been lost when compared to the case in which the ray was used first. In this way, they say, we can often do with one examination what it would require two to accomplish if the fracture was radiographed to begin with. Opposed to this group, there are those who take the view that fractures should always be examined Roentgenologically prior to any manipulation. Thus, they argue, the patient is frequently saved some needless procedures as well as the surgeon, and conversely we often discover the advisability of carrying out some other manipulation which would otherwise have been omitted. As in all similar discussions, there is truth and fallacy in the arguments of each side. Neither extreme is ideal, but each must be so qualified as to show the good points of the other.

In order to arrive at the proper decision, therefore, each case must be regarded as an entity to be considered separately, to be carefully examined and thought over before deciding one way or the other. This consideration should include the attention to such matters as the age of the patient, the physical condition of the patient, the probability or the presence of shock, injury to the soft parts, the number of fractures, and the bones involved.

Since the questions in each case are so numerous, my advice must be taken as merely pointing the way and not as fast and hard rules. To make a general division, we may say, that those patients who are in feeble health, the aged, those with liability to shock, and those who show considerable injury to the soft parts, should be examined with the Roentgen Ray before the institution of any manipulation, whenever it is possible. If the patient has to be carried some distance, immobilization is very necessary, but permanent dressings are not advised. By this preliminary examination we may see the conditions accurately, may even work before the screen, and may be enabled to replace fragments with the minimum of pain and manipulation. If an anesthetic is called for, we may by so doing, shorten its duration, thus avoiding shock. We may be enabled to avoid further injury to the soft parts, already seriously impaired. The above considerations are also of special value when we are dealing with the cases of multiple fractures where the manipulations are bound to be extensive, and where the saving in time, pain, etc., is of importance.

The cases occurring in the young and hardy, showing simple and single fractures presumably, with the patient in good physical condition, and no extensive injury to the soft parts, may be handled for the reduction of deformity prior to the Roentgen examination with some hopes of one examination being sufficient, and also with the knowledge that, if further manipulations are needed the patient is in the best of shape to withstand them. This must be taken to refer only to those fractures in which any handling before radiographing is not distinctly counter-indicated.

For there are certain regions, and certain bones and joints, which should practically always receive, in case of injury to them which is probably coincident with fracture, a complete Roentgen examination before any manipulation whatever. Chief among these is the hip joint including the upper end of the femur. The hip is more frequently fractured in the senile, at a time when all the processes of repair are growing more and more uncertain, than in the young or middle aged. If an impaction occurs, Scudder says, union will result, while if there be no impaction (or if impaction is broken up), union may result. Manipulation of an impacted fracture is the chief cause of the release of this impaction, 'a consummation devoutly to be'—avoided —if I may be permitted to paraphrase. To quote Scudder again, "Only gentle strong traction in the line of the long axis of the thigh should be made to elicit crepitus and abnormal motion." The force necessary to fracture the hip in an elderly patient is so very slight that any case presenting inability to use the leg should be radiographed at once to determine the nature and extent of the injury. And while this is especially urged in the case of the elderly, it holds equally for a smaller percentage of hip injuries in those who are younger.

What has just been said concerning the hip region applies to a lesser extent to the region of the shoulder. Here impaction does not so often occur, but partial fractures are frequent, and in these cases also manipulation is not warranted, for the incomplete may be easily changed into the complete. Furthermore, in an oblique fracture of the upper end of the shaft of the humerus, presenting a long sharp process of bone in proximity to the axillary structures, care must be taken to prevent further injury to those structures, so an early Roentgen examination in this region is indicated, on this score. Fractures of the anatomical neck of the humerus are easily and often overlooked. They occur like the fractures of the neck of the femur mostly in the aged, though not always so. A case seen by me recently was in a young male adult, and there was such great displacement of the upper fragment, with the upper end of the shaft protruding through the capsule, that the upper fragment had eventually to be removed. Owing to the unforseen position of the fragments in such cases, much might have been saved by a Roentgenographic examination before manipulation.

Another region where the Roentgen Ray should be used as routine prior to any manipulation is that of the cervical spine. The greatest of care is necessary in the handling of any injury in this part of the spine, and the earlier the patient can be radiographed the better. There is an immense difference between the various pathological findings in injury to the cervical spine, when treatment is considered, for with slight variations in the deformity or symptomatology, the treatment varies from absolutely leaving the deformity in status quo, to performing a definite manipulation. Nothing but the Roentgen Ray can tell us in the majority of cases of cervical vertebra injury whether we are dealing with fracture or dislocation.

There are cases of fracture near the elbow joint which would be frequently mismanaged by manipulation prior to a Roentgenograph, for the determniation of position of fragments and lines of fracture. In one such condition we find the ulna fractured just below the coronoid process, with the upper end of the lower fragment impinging on the anterior lip of the upper fragment. Should extreme flexion be attempted, the coronoid might be forced backward causing a dislocation and increasing the seriousness of the case. It therefore seems advisable, in most cases of injury to the elbow region, to radiograph before attempting reduction.

The main fractures which are most apt to be rightly dealt with, in default of the Roentgen Ray's aid, are Colles and Pott's fractures, fractures of the shafts of the long bones, fractures of the jaw, and of the metatarsals, metacarpals and phalanges. As to the other bones we may class them as on the border line, and view each case on its individual features.

Fractures are serious. They require the greatest care and study in their handling if uniformly good results are to be expected. The correct diagnosis of the fracture as to its extent, number of fragments, position of fragments, direction of line of fracture, position in regards to muscular and ligamentous attachments, impaction, complication with dislocation, all these points become necessary knowledge, if we are to treat our fractures in the most intelligent manner. How else can we possess such knowledge, and have the proof that our knowledge is exact, unless we use the Roentgen Ray when it is indicated?

The foregoing suggestions are open to discussion, and I am sure that there is room for a difference of opinion on some points, especially when individual cases are cited. But in the main I feel sure that my ground is well chosen, and if by this short paper I have turned your thoughts towards a careful consideration of the questions involved, be your conclusions with me or against me, I shall feel well repaid.

WAR WORK OF AMERICAN MEDICAL WOMEN.

By Eliza M. Mosher, M. D., Brooklyn, N. Y.

The second annual meeting of the Medical Women's National Association, Dr. Bertha Van Hoosen of Chicago, President, was held in New York City, June, 1917. In view of the pressing need of physicians and surgeons in the war zone and in the devastated districts of Europe, a War Service Committee was appointed by the Association to deal with the situation. This body created an Executive Committee with defined powers, of which Dr. Rosalie Slaughter Morton was unanimously elected chairman. Dr. Morton's selection for this post was a wise one. he Serbian Government had bestowed upon her a decoration for her service in that country. In France special privileges had been given her to inspect and study the French hospitals, and after returning home from foreign duty she has kept in close touch with the work.

Mr. Leo Schlesinger, of New York City, placed at the disposal of the committee a suite of rooms in his office building, 637 Madison Avenue, admirably suited to its purpose ,and there early in June the committee was installed and intensive work began. Before the committee had completed its organization, Dr. Franklin Martin, chairman of the General Medical Board of Washington, asked for an outline of its plan of work. This outline which Dr. Morton presented in person, received the unanimous approval of the Board and Dr. Morton was appointed a member of it and chairman of a committee of nine women physicians from different parts of the country, who were selected from a list of twelve submitted to Dr. Morton.

This committee of women physicians of the General Medical Board, may be regarded in the light of a congressional committee, its constituency being the women physicians of the United States. If the latter wish to have force and efficiency, organization is necessary. This committee of nine members is not permitted to increase the membership of the General Medical Board; obviously, therefore, it could not encompass the extensive work now going forward under the American Women's Hospitals, which it is hoped, the general co-operation of women throughout the country will make even more extensive and thorough, and consequently of more value to the General Board. We are now in a position to supply the data necessary to supplement that on the cards sent out from aWshington, and on file there.

A copy of the outline prepared for the general medical board was also laid before Col. J. R. Kean, director of the Department of Military Relief of the American Red Cross, and the Surgeon General of the Army, General Gorgas. Both expressed the greatest interest in and approval of the work. General Gorgas said that if the war continued for any length of time, the services of every available woman doctor in the country would doubtless eventually be needed.

To anticipate this need, the plan of work, with registration blanks, was mailed to 5,000 medical women, asking them to enroll. On October 6th, at the time the first quarterly report of the American Women's Hospitals was issued, 115 women had registered for service expressing their choice as follows:

I. Women's Units, 150; II. Women's Units to Allies armies, 110; III. Service in established Units, 103; IV. Maternity Units to devastated regions, 84; V. Village practice, 25; VI. For service in any of the above five, without choice, 110. The registration blanks are still coming in and it is hoped that every woman physician in the country will record herself as being willing to serve her country some way in this, its hour of need.

Dr. Esther Lovejoy of Portland, Oregon, and Dr. Alice Barlow, of Winnetka, Ill., are now making a study of civilian conditions in France for our War Service Committee and the following doctors, members of the American Women's Hospitals have been sent by the Red Cross to the other side:

Esther L. Blair, M. D., Pittsburg, Pa., Women's Medical College of Pa.

Dorothy Child, M. D.,, Johns Hopkins University.

Florence Child, M. D., Johns Hopkins University.

Edith Lyon Heard, M. D., Women's Medical College, Pa.

Mary Nevin, M. D.

Esther E. Parker, M. D., Cornell University.

Helen L. H. Woodroffe, M. D., Denver Homeopathic, 1900.

Marion C. Stevens, D. D. S., Tufts College.

Ida R. Shields, M. D., University of London, England.

Laura C. Wiggin, Anaesthetist.

In September the Red Cross asked for two units of women doctors to go immediately to Roumania. Their departure has been delayed for diplomatic reasons, incident to the situation in Russia. There are also in readiness forty doctors, who may be called within the next thirty days, and units have been arranged which can be mobilized within a few hours.

The women doctors present an attractive appearance in their uniforms, planned by Dr. Morton at the request of the Red Cross. The lines of the Red Cross uniform for men are followed, and the uniform is both smart and attractive.

The American Women's Hospitals' flag and insignia designed by Miss Brenda Putnam, a niece of that brilliant pioneer among women physicians, the late Mary Putnam Jacobi, has been adopted. The flag is blue and white; the drooping wings, the symbols of the American Women's Hospitals, are grouped around a shield bearing the name "American Women's Hospitals." The pins of bronze, are sheltering wings, denoting protection and comfort, with the emblem of the various branches of the service placed upon them.

Open meetings of the American Women's Hospitals were held at its headquarters every Thursday afternoon throughout the past summer and will be continued indefinitely. These meetings presided over by Dr. Morton, and in her absence by Dr. Emily Dunning Barringer, the Vice Chairman, have been of great interest, not only to the members of the organization, but to the general public. Inspiring speeches by friends of the organization, and officers, doctors and nurses returned from the front have been a feature of these meetings. One of the most interesting of these was the address made by M. Liebert, the French Consul General at New York.

An important branch of the American Women's Hospitals is that of the A. V. A. (American Volunteer Aid). This body was formed after the British V. A. D. (Volunteer Aid Department), and is in a thriving condition.

The Surgeon General of the Army, has expressed his willingness to place in base hospitals, as Contract-Surgeons, women physicians as anaesthetists, radiographers, and laboratory workers at a salary to be arranged by contract, and not to exceed $1,800 per year. The need for laboratory workers is so great that the American Women's Hospitals have encouraged the opening of courses in this branch at the Women's Medical College of Pennsylvania, Women's Hospital, New York; and at the Research Laboratory of the New York city board of health. These courses will be given to college women who have already studied chemistry and biology, in order to fit them, at a nominal expense, to become laboratory technicians, and to assist our physicians. Any physician connected with laboratories which offer such courses in the different parts of the United States, and women wishing to apply for this training are requested to take up the matter immediately with the National Chairman of Laboratory work, Dr. Martha Wollstein, No. 1 West 81st Street, New York City.

The Chairman of the Committee on Army Hospitals in the Home Zone, both for acute and convalescent cases, is Dr. Mary Almira Smith, 33 Newbury Street, Boston, aMss. The American Women's Hospitals, have in Boston, two hospitals in readiness for convalescent cases and several others near New York. The Women's Army General Hospital of New York, which has recorded its founders and equipment in the War Department at Washington, has been told by Surgeon-General Gorgas, that it will be notified when this is needed, and that it has the same status as all other army hospitals in the home zone.

The Women's Committee of the General Medical Board in Washington, has had two meetings, July 29th and September 29th. A registration card was sent to the women physicians of the United States with a view to ascertaining how many would be willing to serve in base hospitals as contract-surgeons, radiographers, laboratory workers and dressers of wounds. These cards are now being filed in Washington for reference in case need arises to place women in base hospitals to release men for field hospital service.

The following are the regulations regarding contract practice:

1. Contract-Surgeons do not receive pensions except by special act of Congress.
2. The Government pays for transportation, quarters, heat and light, the same as furnished the first lieutenants.
3. There is no additional pay for foreign service; the contract specifies where the service is to be, and the amount to be received for this special service.
4. $1,800 a year is the maximum, the minimum being whatever agreed to for the particular service to be rendered.
5. The amount is regulated by agreement; the surgeon states his price and the Government accepts or rejects.
6. The immediate superiors are commissioned officers of whatever rank in command at the station where the contract-surgeon serves, even although they be only first lieutenants.

The Surgeon-General's office expressed an interest in knowing how many women wished to become members of the Army Reserve Corps, and a letter was sent by the eGneral Medical Board Committee of Women Physicians to the presidents of medical womens' organizations asking an expression of preference for this service, but comparatively few made their offer of war service absolutely contingent upon their becoming officers in the Army Reserve Corps.

It is the intention of the Medical Women's National Association to continue the work of this War Service Committee until the end of the war if the need for it continues to exist.

THE TREATMENT OF INFECTED WOUNDS.*

By George A. Caton, New Bern, N. C.

Two tendencies are to be noted in the modern treatment of infected wounds—one toward the dry method with alcohol and iodine, and the other by means of mild antiseptic solutions—usually alkaline, some surgeons favor one method, some another. Iodine is much used by American surgeons and most of them agree that when it is used the preliminary cleansing of the skin in contact with the wound should be made with alcohol and the wound itself lightly swabbed or painted with iodine or with a solution of iodine and alcohol. If watery solutions are used as preliminary cleansing agents to the iodine the wound should be allowed to dry before the iodine is used, as experiments have demonstrated that iodine is much more effective as a germicide on a dry surface. The dressings should be with dry sterile gauze or an alcoholic dressing is preferred in punctured wounds. Where antiseptic solutions are used, the recent tendency is toward the use of solutions which simulate as nearly as possible the serum of the blood, as contrasted with the use of bichloride, carbolic acid and various other antiseptics. Hypertonic salt solutions, preferably combined with sodium citrate is used by many. The ordinary sterile normal salt solution has been used by me in a number of cases of obstinate infected ulcers. Where the wound is superficial, ordinary sterile gauze, saturated with the salt solution is employed, the wound first being cleansed by alcohol or a solution of iodine and alcohol, after which it is irrigated with saline solution and then the gauze packs saturated with the salt solution are placed on the wound. Generally speaking there is no necessity for bandaging unless the wound is at a point where it is impossible to keep the packs on. These dressings in the case of superficial wounds, where the saturated packs are used, are changed frequently, as often as every hour or two, and the packs are kept warm by means of hot water bottles. This sterile salt treatment of infected wounds is of the greatest value, and I unhesitatingly recommend to the profession. I have seen infection of a most obstinate character disappear in three or four days, which had resisted all other measures at my command. I recall a case of acute ulcer of the foot, which was rapidly spreading, which I treated some ten years ago. This infection had resisted all of the so-called antiseptic treatments. At this time I had never treated a case with the saline solution, but I was up against a proposition, the infection was spreading rapidly, and I feared that an amputation above the knee would become necessary. This patient was placed in the hospital and the nurse instructed to apply the sterile salt packs every two hours, and to keep them warm by means of hot water bottles, this was done, and a violent rapidly spreading ulcer controlled. In a few days epidermization followed normally. It is interesting to observe that at the present time a 5 per cent. solution with ½ per cent. citrate of soda is being used by a group of English surgeons in the field. When the soda is not available the salt solution alone is used. Sea water may be used when available. Open deep wounds may have the solution poured into them and packed lightly with sterile gauze. In the surgery of the European war all manner of antiseptics have, of course, been used in the treatment of infected wounds, including iodine, carbolic acid, hydrogen dioxide, the salines, and a sodium hypochlorite solution, prepared by Carrell and Dakin. Iodine is frequently employed in first aid work for field dressings, but in the more permanent hospitals the wet antiseptic dressings with free drainage seem to be growing in favor. Just at this point I desire to enter a word of protest against the use of the so-called surgical powders, ointments, balsams, etc., used in infected wounds followed by bandaging, the object being to free the wound from infection and promote healing. Exceptionally, of course, such treatment of infected wounds may be followed by satisfactory results, but usually when the dressings are removed, pus is in evidence in considerable quantities. This method of caring for infected wounds is in my judgment unscientific when they are of sufficient importance to cause the patient to take his bed. I have never yet been able to free an infected wound or an ulcer of infection, by means of these so called antiseptic remedies. On the contrary, I have never yet been disappointed in using the salt solution as above outlined. In deep wounds, I have used the continuous saline irrigation, and in the superficial wounds the packs have been used, and kept warm as outlined above. I may add that in all ulcers which heal sluggishly there is no better promoter of epidermization than the saline packs. Exposure of the ulcer or wound to sunlight in case it be superficial is another measure having value in the promotion of healing in the treatment of these cases. The imperative necessity of immobilization and absolute rest is self-evident. Deep wounds must be opened up and perhaps a very good plan here, is, after removing devitalized and infected tissue as far as is possible, to swab with 3½ per cent. iodine solution and alcohol, afterwards the saline drip by means of soft catheter perforated in several places in that part of the catheter, entering the wound, until the appearance of the wound indicates freedom from infection and healthy granulation. I believe the giving of immunizing doses of tetanus antitoxine in all punctured wounds or wounds in which we have reason to suspect tetanus infection to be an absolute necessity and a duty which we cannot afford to neglect. General treatment in persons who are anemic, syphilitic, malarious and whose resistance is, for any reason low is necessary. Iron and arsenic in the form of cacodylate of soda, given hypodermically, is indicated in anemia, mercury and pottassium, iodide in syphilis. Other cases of infected wounds where there are general diseased conditions must have general treatment to meet the indications.

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*Read before the Seaboard Medical Association at Norfolk, Va.

As to the treatment of infected wounds by means of hypochlorite solutions I am not prepared to say very much. We have employed Dakin's solution in 1 per cent. strength in our hospital work, in wound infection, for a period of perhaps six months. In certain cases our results from the use of this solution have been fairly satisfactory. I am not prepared to state, however, whether the Dakin's solution possesses the great merit claimed for it. I believe everyone should give it a trial and my opinion is, that he will find that it is an antiseptic agent of considerable value. The Dakin's solution may be used very much as the saline is used, deep punctured wounds after cleansing carefully may be packed with gauze saturated with the Dakin's solution, the packing may be saturated every few hours, for a period of 48 hours at the end of which time the packing may be removed and the wound examined, if found clean the saline solution by the drop method may be employed. If the wound is still infected it may be packed with more gauze which has been saturated with the Dakin's solution. We have employed this solution in a 1 per cent. strength.

VERUMONTANUM, PROSTATE GLAND AND TESTES.

By W. Frank Glenn, M. D., Nashville, Tenn.

Many years ago I wrote an article on the Verumontanum and the part it played in many sexual troubles. It was not taken seriously at the time, by the profession, as they did not know or care to know anything about the Verumontanum except its anatomy. But in this advanced age when the profession is waking up to the fact that many organs formerly passed over and pushed aside, are now known to possess important and vital functions necessary to perfect health; due to what is known as their internal secretion. Notably the Thyroid, Supra-renal, Pituitary Glands, Testicles and Ovaries. All of these manufacture an internal secretion which is necessary to maintain a well-balanced physiological action, thereby producing perfect health.

The Verumontanum is situated on the floor of the prostatic urethra, being about three quarters of an inch in length. When the sexual organs are in a quiescent state it is only very slightly elevated above the level of the floor of the prostatic urethra. It is composed chiefly of erectile tissue, and when sexual excitement or stimulation takes place coincident with erection of the penis, the Verumontanum becomes erect also by the same process as the penis; viz., sudden and intense filling of its blood vessels. It enlarges as a result of sexual desire, sufficiently to close the posterior urethra, thereby preventing the semen from entering the bladder, and also explains why one cannot urinate when the penis is erect.

The Verumontanum is the seat of the intense pleasure accompanying sexual organism. On either side of the Verumontanum, in the floor of the prostatic urethra the ducts of the prostate gland open, and under the anterior extremity of the Verumontanum is a little pouch of mucous membrane, (Sinus Pocularis), into which the Vasa Deferentia empty the contents of the seminal vesicles. We readily understand, by this anatomical arrangement, that the prostatic urethra is where all of the vitally important processes necessary to reproduction take place. The anterior urethra, spongy and membranous portions, serving the purpose of conducting the urine out from the body and depositing the semen well down into the vagina to the neck of the womb. The vital portion of the semen containing the spermatozoa is secreted by the testicles. It is then conveyed to the seminal vesicles and stored up there, to be used when occasion requires. The semen in the seminal vesicles is viscid and can hardly be poured from a vessel; but when it is mixed with the secretion of the prostate gland two very important things take place. First, it is rendered sufficiently dilute to flow easily out of the urethra; second, the spermatozoa are inactivated and rendered motile. Impregnation takes place by the spermatozoon entering into the ovum, which is manufactured by and discharged from the ovary with every menstruation. While the spermatozoa are anatomically perfect while resting in the seminal vesicles, they do not possess power of motion, nor can they impregnate until they are mixed with the secretion of the prostate gland. When the spermatozoa are thoroughly mixed with the secretion of the prostate gland, they at once become vitallized and also are given motility by which they work their way through the uterus, into and through the Fallopian tubes to the ovary itself.

The process of sexual intercourse whereby the semen is deposited well down against the mouth of the womb is one of the most beautiful and interesting in the body. It is the harmonious and synchronous action of several parts which make a perfect whole. The testicular cells secrete the semen and through their ducts store it in the seminal vesicles; it is rendered more fluid by being mixed with the secretion of the vesicles. It is lying there in these reservoirs, ready to be thrown into the prostatic urethra when the occasion demands. The Verumontanum is the organ which produces the intense desire for the opposite sex, then by reflex influence through the nervous system both penis and Veru become filled with blood producing erection in both, and intensifying the sexual desire. The organs are now prepared for normal intercourse, and when the orgasm takes place the semen is expelled from the seminal vesicles into the prostatic urethra at the same instant the prostate pours out its secretion, mixing it thoroughly with the spermatozoa and at the same time by the aid of the ejaculatory muscles, the semen is thrown out of the mouth of the penis.

The Verumontanum is a far more important organ than formerly supposed, and understanding its functions explains many diseases of the genito-urinary tract and the nervous system, which otherwise would remain extremely puzzling. We are frequently consulted on account of premature ejaculation when intercourse is attempted. Many times intromission is hardly made when ejaculation takes place; thereby rendering the act both unsatisfactory and depressing. Another most annoying affliction is that of nocturnal emissions. I was taught when at college and in medical books for some years after, that these conditions were due to weakness of the parts and should be treated with strychnine and phosphorous. I soon found that this treatment instead of benefitting, always made them worse. I am now positive that in premature ejaculation and frequent nocturnal emissions we have an hyperaesthesia of the Verumontanum as the cause. It is in a state of hyperexcitability, not necessarily inflamed, but hypersensitive, and in that condition what in the normal state would be only a slight stimulant becomes a most powerful one and produces premature emission. Such patients do not need a sexual stimulant at all, but a sexual sedative, and when this line of treatment is carried out, success always follows. It is as if a stringed musical instrument were tuned too tightly, the strings drawn too tense; it must be toned down, the strings loosened instead of tightened. When the sexual organs have been exhausted by masturbation or excessive intercourse, the orgasm slow in reaching its climax, then the nitrate of strychnine, Lecithin and Hypophosphites are indicated. But never in hypersensitive conditions.

In addition to the function of secreting spermatozoa, the testicles manufacture an internal secretion which is not discharged externally at all, but poured into the blood current and in my opinion is the mainspring of life. When this internal secretion is supplied in normal quantity, the individual does not show a tendency to get prematurely old in mind or body, but as the years go by retains his youthful feeling, and mental vigor. With this knowledge of the immense importance a normally developed sexual apparatus plays in the health, vigor, ambition and happiness of the individual, it becomes our sacred duty to teach the youth of the land that the sexual function is not dirty, vulgar or nasty; but that it is the most important function in the human body, and that the effects of reckless abuse and disease, not only weaken the sexual organs but the entire system, both mind and body. The relation of the sexual internal secretion to the human being is the same as the mainspring, to a watch. When the young of the land, both male and female learn how to take proper care of their sexual life, very many hitherto unmanageable nervous diseases, such as melancholia and other forms of insanity, will be banished from the earth.

DUST: HIGH AND LOW—AN ANTITHESIS.

By Jacques W. Redway, F. R. G. S., Meterological Laboratory, Mount Vernon, N. Y.

Dust is not an unmixed evil. The floating dust motes of the upper air include about all that constitutes sky. The rays of sunlight—some reflected from, others refracted by dust motes—are the secret of sky color. The Greek "koilos," the Latin "coelum," and the Anglo-French derivative "ceiling," all refer to the vaulted overhead. Even the Anglo-Saxon "heaven" is merely that which is heaved up, or arched. But it is all dust, plain dust—floating particles so small that an objective which will magnify one thousand diameters will not discover one of them. Yet minute as such a particle may be, it will reflect a beam of direct sunlight that is visible to the eye. Without these particles of infinitesimal size, suspended in air by their repulsion, there would be no sky with its soft and beautiful tints. The glare of the sun would penetrate the blackness of an inferno by day; the stars would stare through it both day and night. Day temperatures would be intolerably hot; the night would bring conditions of arctic coldness.

Still another blessing must be credited to the dust of the upper air. Without it there would be no gentle showers. Whenever the moisture might be chilled to the point of condensation the fall would be a deluge that would come when it came and cease when it stopped. In other words, the floating dust of the air is one of the conditions of life as life now exists. The water vapor that is mingled with the air begins to condense on the floating dust motes. Perhaps they are ice spicules; if so they take the form of white feathery clouds of the middle air, their form being due to conditions of electrification.

A little lower down, say, at an altitude of eight thousand feet, the water vapor condensing on the dust particles changes the angles of refraction and reflection; the droplets are enlarged and the sky is white. A little more condensation, and the droplets cease to float. They coalesce into drops and fall to the earth.

And the dust motes on which the water vapor condenses; well, when they have fully discharged their load of water and are dry enough to be electrified, they are again shot up into the air.

All this is of the heaven, heavenly. Let us get down to earth, and look at the dust in which we live. The difference is as great as the span between heaven and hell. Up to an altitude of five or six hundred feet we are in the sphere of wind-blown or flying dust. In this sphere the dust bears one resemblance to human nature. Some of it is clean and wholesome; a great deal of it is foul and nasty.

As a rule, the lightest dust is carried the farthest by air currents. This form of dust is an urban rather than a rural evil; the greater part is horse dung. An investigation to discover the cause of discoloration of the ceiling of a school room led to the discovery that dust belched out of hot-air ducts contained horse dung as a part of its content. Furnace ash, soot, and moisture cemented it to the paint of the ceiling which at first was softened by the heat. From the ceiling investigation went to ducts and flues; then the nooks and crannies to which every school janitor is blind; then the furniture of the various rooms. The result was the same; horse dung was a part of the dust content. Then the search went to a dozen or more of the shops in which food was sold. And the horse dung was there. Incidentally, there were many other substances present in the wind blown dust examined—earthy matter from the streets, chimney products, desiccated organic matter from dump piles and garbage receptacles, fragments of flies that had been ground fine, scales of lepidopterious insects, flower and tree pollen, soot, lint, tree smut, the spores of various moulds—all these were found in the street dust that pervaded stores, shops, and dwellings. And if the air is very moist various kinds of bacteria, especially the myxobacteria, and colon bacilli may be rounded up on the dust slide.

Now, dust cannot be prevented, but it can be minimized as to quantity. In one instance, tarring the street reduced the flying dust more than ninety-five per cent. Washing hard-paved streets removes the fine dust that the sweeper leaves to be carried into our houses by the wind. Oiling or waxing wood floors keeps the dust on the floors instead of in the air. A rubber mat, instead of a woolen rug at the door will remove from the shoes a great deal of the dust that otherwise would be tracked into the house. It is merely thoughtfulness in the matter of a few details. Precipitating dust from the air is an interesting scientific process. The essential, however, is not to remove the dust from the air of buildings, but to prevent it from getting into the air. And this, so far as the coarser dust is concerned, is not an impossibility.

Many months ago, writes Leonard Williams in the "Practitioner," London, a friend said to me, "How do you treat pneumonia?" Having never completely divested myself of my truculent mid-Victorian training I replied, "With Faith, Hope and Charity. Faith, in the medicatrix naturae, Hope, for the absence of complications, and Charity with those who differ from me."

"You don't give Digitalis?" "No."

"Nor Calcium?" "Neither."

"Not even thyroid?" "Animal farceur!"

"And you make no local applications to the chest wall?" "Never."

"Then you are wrong. Listen."

And, being a willing listener, I listened. Some twenty years ago he had seen much hospital work in Paris. At that time in the treatment of Pneumonia the practice of many of the French physicians was to blister the affected side, and he had satisfied himself that the cases thus treated did better than those in which the blistering was omitted, and he adopted the practice in England. After a time, however, largely on account of the objections urged by the patients and their friends to the pain and discomfort produced by the blisters, he rather reluctantly ceased to apply them and reverted to the "expectant" method in which he had been nurtured. Time went by, and one day he received an advertisement of a preparation known as Antiphlogistine, for which it was claimed that when applied to the affected side in Pneumonia, either lobar or catarrhal, it had the effect of reducing the temperature, slowing the pulse-rate and promoting sleep without any additional treatment. With the memory of his blistering days full upon him, he decided to give it a trial. His experiences were such as to give him encouragement, and to bring him near to believing that not all men, not even all American advertisers, were necessarily liars.

I decided to turn my attention to the claims of Antiphlogistine, which up to that time I confess to having regarded merely in the light of a convenient form of poultice, locally dehydrating, decongestioning and comforting, but probably innocent of any effect upon pulse rates and temperatures. Here again, one case in the history of my conversion must suffice.

In November of last year a young Belgian of 20 years was admitted into the French hospital with a temperature of 104 deg., a quick bounding pulse, slight cough and severe pain in the left side. On admission physical examination was negative. The following day his nose bled, but neither Inor the resident—an experienced Belgian doctor—could detect any signs in the chest. That night he was delirious and coughed a great deal. On the following day he voided some sticky sputum which was typically rusty, and developed labial herpes. Physical examination now revealed the classical dullness and tubular breathing over the lower lobe of the left lung for which I had been looking. His temperature was 105 deg. At about 4 p. m. a gamgee jacket thickly spread with Antiphlogistine was applied over the whole chest. The following morning his temperature was normal.

Now, I do not pretend to explain these happenings; for the benefit of the open-minded, I content myself with recording them. The clinician must protect himself against the sneers of the laboratorist. That we are unable to follow the processes by which a healing measure produces its effect is a sorry reason for discarding it. The search for a scientific explanation is a laudable and, academically, an interesting adventure, but in practice it is but a sleeveless errand. Trosseau, probably the greatest clinician of any time, has expressed in characteristically simple words the only position proper for us to adopt: "Je ne vois en therapeutique que deux choses: le medicant applique a l'organisme, et le resultat eloigne de cette application. Quant aux phenomenes intermediares, ils nous echappent, et nous echapperont probablement toujours." Who can explain the process by which digitalis works its wonders; and what advantageth him who can?

Nocturnal Incontinence of Urine.—Uteau, Schwab, and Raton (Paris Medical), note that essential urinary incontinence, existing in the absence of any detectable pathological lesion, is observed so commonly in military practice as to have been termed by some the bane of urologic dispensaries. Generally rebellious to all treatment, it is by no means incompatible with apparent robust health. Yet careful study has led the authors to conclude that these patients are regularly instances of physical debility. In the first place there exists renal debility in a slight degree, as shown by a tendency to diminished urinary acidity and lowered elimination of phosphates, especially on nights when bedwetting occurs. This renal debility justifies assimilation of the incontinence to attacks of renal neurosis, a term used by Janet in relation to phospaturia. A marked debility of the bladder wall and sphincteric musculature was, furthermore, regularly noted. Finally, these cases are also deficient cerebrally, and this deficiency may underlie the other disturbances. This is especially noticeable as regards the pseudoinsufficiency of bladder capacity, which alone will explain the imperious impulse to urinate. In this connection occur evidences of insufficiency of inhibition, a frequent phenomenon in degenerates. Nocturnal incontinence is not an isolated symptom, but is part of a special clinical syndrome, systematic study of which in the individual case will assist in the differentiation of actual from simulated incontinence.

Charlotte Medical Journal

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EDWARD C. REGISTER, M. D., EDITOR.

CHARLOTTE, N. C.

CONTEMPORARY BIOCHEMISTRY AND THE FOOD SITUATION.

Great is the army of workers who are striving toward the goal of synthetic production of foodstuffs. For some time, it must be acknowledged, the prospect was far from a bright one. There is an alluring attractiveness about the fruits of the field which no creation of the chemist, however esthetically labeled, can rival. And further, heretofore, all efforts to keep animals alive on "pure" foods, which included proteins, fats and carbohydrates, were absolute failures.

That the failure was due to the lack of some unnoticed enzyme, or other constituent of ordinary food, had long been suspected; but it remained for Funk, of Russia, and Suzaki, Shimamura and Odake in the Orient, to isolate that most elaborate and elusive biochemical entity called "vitamine" by a few, "oryzanin" by others.

Remarkable are the properties of vitamine. In seemingly infinitesmal proportions it converts a foodstuff void of nourishment into a most nourishing and growth inducing ration. Even more strikingly phenomenal is the virtue inherent in vitamine and newly indicated by Eddy and Roper of New York, namely, that of being able to induce growth, and, having induced it, to effect the continuing of the growing process, though the vitamine be removed. tIs action in this fashion recalls that of the catalyst of the chemist. The catalyst inaugurates tremendous chemical activity but itself escapes unscathed. The vitamine inaugurates tremendous physiological co-ordination, and when its organization of metabolic forces is complete, vitamine may vanish and permit the reconstructed mechanism to carry on its own burdens.

Arctic explorers have warned us how futile of purpose are compressed foodstuffs, owing to their limited bulk. Adequate bulk is a prerequisite of whatever ration.

In these days of conflict when in pursuit of world democracy our country finds need to supply unending stores of fuel to keep alive and conditioned the many who have undertaken to secure victory, there is every reason to materialize the undigested flood of knowledge sealed within the test-tube of the biochemist.

Vitamine can well be combined with bulky foodstuffs; and there would result eliminated waste, increased food values of those cheaper dietary articles, and an assured plenty of sustaining and nourishing rations for our million and a half "over there" and our hundred million "over here."

It is the biochemist, expert in nutrition, that must solve the problem of feeding the peoples of a dozen allied nations, if the deficiency in production due to war of 525 million, 662 thousand bushels of wheat, corn, oats, barley and rye, and 115 million, 5 thousand head of cattle, sheep, and hogs, experienced in 1917, continues to spread.

THE MEDICAL CORPS OF THE U. S. ARMY.

It has been stated editorially in some of our exchanges that the grade and character of men in the medical and surgical service generally accepted by the public, are not good enough for the army and navy service; that the inferior element of the medical profession is left to take care of our fathers, mothers, brothers, sisters, sweethearts and loved ones at home. I think thi sis almost a cruel comparison. The conclusion is certainly inaccurate.

The writer has had an abundant opportunity to make comparisons of the medical corps of the army and navy, and he has also had plenty of opportunities to know the personnel of the physicians and surgeons who are left at home, and he has no inclination whatever to make comparisons, but will state that some of the finest surgeons and physicians in the country are now in the army, and some of the poorest physicians can also be found there.

It is difficult for a medical gentleman to get in the army as surgeon, certainly if he has a desire to go to France, that is if he is over forty-five years old. We have, however, a great many men over there who are not only nationally known, but internationally known; men in the national service, also some in the medical service who are over 45 years old. We are glad that they are patriotic enough to make the sacrifice professionally and financially, because it is in reality a great hardship for a man fifty years old to enter the medical corps for foreign duty.

The point that I want to make is, that if I were to make a comparison, I would say that we have as much surgical skill and medical talent outside of the United States Army as we have in it. This may not be satisfactory and the ideal situation, but in my opinion, it exists. We are proud to mention such names as Finney, Young, Bainbridge, Mayo, Crile, Ochsner, McArthur and McGuire, men who are known all over the world, men who so well represent the best element of the medical profession of this country, who have volunteered and are now actively engaged in the medical and surgical service, some of them already abroad. We admit that it would take some thought to mention other names in this country who have been left behind and who would compare favorably with men whose names we have just mentioned, but it can be done.

The writer has no inclination whatever to criticise the medical profession in any way, for the manly and patriotic way in which it has responded to the call for volunteers for the army and navy. If it is necessary for the government to draw twice as heavily from our ranks as it has, the call will be honored.

THE NEEDS OF THE MEDICAL SERVICE.

Under the above caption, Lieut. Col. R. E. Noble, M. C., U. S. A., presented before the last meeting of the Southern Medical Association, a most admirable paper, which convincingly answers the many questions asked of the department, and which have caused perplexing hours of thought with many doctors.

The communication appears in full in the December issue of The Southern Medical Journal and should be read by every doctor in this country.

In a previous paper by the same writer, presented prior to the time that the United States entered the world struggle, as in the above referred to communication, Colonel Noble said: "On the medical profession rests a heavy responsibility, for with the medical profession rests the subject of medical preparedness."

This is a particularly impressive paragraph and pregnant with truth, and its meaning should sink deep into the heart of every doctor in America. What was a fact before we entered the struggle is more than a fact now, since we have joined forces with our Allies in a world war, and which will only be terminated by the success of our arms.

We have not a sufficient number of medical officers to care for the combatant and other forces now in training. With the new draft soon to be called and the possibility of the raising of an army of between five and ten million, as has been authoritatively foreshadowed, we would repeat, "On the medical profession rests a heavy responsibility, for with the medical profession rests the subject of medical preparedness."

The responsibility of the medical profession of the United States and its importance in the successful outcome of the war cannot be too forcibly impressed upon every doctor who is mentally and physically fit and within the age limit, and they are urged to offer their services now.

That the Surgeon General should have an immense Corps of Medical Reserve Officers upon which to draw, enabling him to place the individual where he will be best fitted for the service is manifestly apparent. This will mean efficiency and by efficiency alone can the responsibility now resting upon the medical profession of this country be lessened.

Apply at once for a commission in the Medical Reserve Corps and thus relieve the responsibility which you owe to your country, your profession and yourself.

OPERATIONS ON THE OVARY.

The best principle of gynecological surgery, should be the removal of the least amount of tissue consistent with pathological indications of the strictest construction and not with the best surgical technic.

If the surgeon has not the patience or the inclination to disconnect the actual non-functionating portion, it would be far better for him to leave the ovary alone, unless it was cystic or malignant or in a destructive inflammatory condition.

It is difficult for the surgeon to realize the difficulties that the general practitioner encounters, with these patients who have possibly been unwisely operated on by the surgeon. I mean surgeons who are so inclined to remove fragments of healthy ovarian tissue. The most unsatisfactory class of patients that the doctor has to deal with is women who have had their ovaries removed or partly removed. Certainly this is true when the interference has been sufficient to cause any abnormal condition of menstruation. The long list of unpleasant symptoms that follow these operations are common in practice. The patient is always complaining, is hysterical; she is always melancholy, fault finding, either she is laughing too loud or crying. In most cases they are so sensitive until they are shunned by their friends and associates, and it is not so uncommon to find women in our insane asylums, suffering from melancholia due to her surgical history.

One of the best papers that the writer has ever heard, was read by our eminent surgeon, Stuart McGuire, of Richmond, Va., entitled something like this, "The After Histories of Abdominal Operations and Especially Operations That in Any Way Interfere With the Normal Functions of the Ovary." If more surgeons would study these cases from a physician's standpoint, it would be beneficial to the surgeon as well as many of our best patients.

Of course there are many cases of malignant diseases where the functionating substance of the ovary has been completely destroyed, and that operation for their removal is proper regardless of the after symptoms. Possibly it might be well enough for me to add that just where the knife should go and where it should not go in these cases is of a great deal more importance than the surgeon sometimes takes the time to thoroughly consider.

INFINITESIMALS.

To say that there are any genuine homeopaths today is erroneous. The true Hahnemaites are non est. Every so-called homeopath is really an eclectic. They don't confine their practice to infinitesimals of granules, and dilutions, but use opiates, calomel and quinine when indicated. They know they cannot affect a cure in serious cases unless they use potent remedies. To call their sugar granules potentialities is absolutely fancied. If it were not for diet, rest, and nursing, aided by the "vis. medicatrix," they would utterly fail in healing the sick. If the laity knew how these "dilutions" are made they would not be tolerated.

Whatever remedial agent is employed in the treatment of disease, it should be only just what is required to accomplish results; but excessive and heroic dosage should be avoided. Learn a lesson from the homeopaths, and give smaller doses, more frequently repeated. The sick have a conceit, and a faith, that if a medicine is in a concentrated form, and oft repeated, it will hasten a cure. The "every 3 or 4 hours" prescription seems too slow to the sick. There is nothing the laity know so little about, of the efficacy of medicine, and their faith can be enlisted, and it can be done more effectually by oft-repeated dosage.

They will think the remedy will rapidly master their ills. Then again, above all things, prescribe eligible and palatable agents if possible.

To be homeo granules, and dilutions are a fraud so far as curative effect is concerned, but we will meet their humbugery by prescribing concentrations which accomplish positive results.

The fact that there are ninety-nine regulars to one homeo ought to convince anyone that scientific men never adopt the "smilia similibus curanter" system, or theory. If it were scientific and curative there would be but few regulars. The more knowledge investigation and skill a physician possesses the more certain he will be to condemn homeopathy as a fraud. It is a strange thing that people will risk their children to homeo treatment, but will not risk themselves. Their plea is that their medicines are so easy and palatable to administer. We must meet those people's pleas, by seeing to it that we recommend medicines that "children cry for." F.

MOBILIZING THE PROFESSION FOR WAR.

Until the entire medical profession of the United States, or at least those who are mentally and physicall fit and within the age limit, are mobilized within the Medical Reserve Corps of the United States Army, not until then can we give to the Surgeon General that efficiency which he so badly needs in having a large body of medical officers upon whom to draw.

You may never be called, at the same time your joining the Medical Reserve Corps and placing your services at the command of your country, clearly indicates the patriotism which the medical profession, as a whole, should evince and which we must manifest if we are to win the war.

Every doctor must realize that success depends upon a carefully selected and thoroughly trained body of medical officers. By careful selection, we mean the placing of a medical officer in a position where he is best fitted for the service, and only by having an immense corps or the entire profession mobilized upon a war basis, can we serve our country to the best possible advantage.

This mobilization of the entire profession should come from within the body itself, but every physician coming within the requirements of the service, as to age and physical fitness, should seriously consider this suggestion and not wait for complete mobilization but apply at once for a commission in the Medical Reserve Corps of the United States Army.

It is not only for the combatant forces that medical officers are required but for sanitation, hospital camps, cantonments and in other departments where the health and life of the forces are dependent upon the medical officer.

We have within the profession a sufficient number of doctors to fully meet the requirements of the Surgeon General's Office whatever they might be, but to be of service, you must join the Medical Reserve Corps to enable you to meet the appeal which is now being made for a large and efficient Medical Reserve Corps upon which the Surgeon General may draw as requirements demand.

DR. J. L. NICKERSON.

Dr. J. L. Nickerson, of Richlands, Onslow County, died on January 25th.

Dr. Nickerson was 66 years old and was one of the most prominent physicians in medical circles in North Carolina. He was a physician of recognized ability. For several years he was a member of the Board of Health of North Carolina. He first exhibited his professional ability while serving on that board. He was not only acceptable to his associates on the board, but rendered great value to the people of the state. In 1908 he was elected a member of the board of medical examiners of the state of North Carolina, and served acceptably for six years, retiring in 1914.

Dr. Nickerson had indeed a very pleasant personality, he was an attractive gentleman, and had few enemies and many admirers. He was not a man that pretended one thing and acted another. He was absolutely reliable in every way. The writer regards this fact in a man's character the highest compliment that can be paid him. Dr. Nickerson was an honorary member of the North Carolina Medical Society. He graduated at the University College of Medicine in New York city in 1875 and was licensed by the state board of medical examiners, to practice medicine in this state the same year. He joined the State Medical Society five years later in 1880. For thirty-seven years he was an active member of the organization and a regular attendant. He joined the Tri-State Medical Society in 1910 and was regarded as an able and influential member of that organization. He was also a member of his county society and of the American Medical Association.

Few medical men, if any in this state, was better and more favorably known than Dr. Nickerson. Through his kindness and skill he was not only an uplift to his community, but the people of the state and this whole southern section of the country. The world is a great deal better off on account of his life's work.

TRANSACTIONS OF THE MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA, 64TH ANNUAL MEETING.

This volume of the Transactions of the North Carolina Medical Society, is an exceptionally good one. It contains about 500 pages of reading matter and the illustrations are very handsomely gotten up. Dr. B. K. Hays, the editor of the volume and our very proficient secretary, has done his work beautifully, accurately and very acceptably to the members of our medical organization of this state.

We would feel remiss in our duty of appreciation if we did not especially call attentio nto two articles that appear in the volume. We have in mind that of J. T. Burrus, of High Point, N. C., on North Carolina Hospitals, and the Early History of the North Carolina Medical Society, with numerous illustrations by John Wessley Long, of Greensboro. These two articles are full of interest, and will be of lasting historical value to the association. They exhibit an evidence that it is wise that we should have our transactions appear in volume form, anlynually.

The program for the meeting was full and the numerous papers presented were all of a very high order. From a comparative point of view it clearly exhibits the fact that the Medical Society of North Carolina is not developing in point of number of members alone, but is developing rapidly scientifically.

CHILDREN'S BUREAU.

The lives of one hundred thousand of the nation's children are to be saved in a child welfare drive which the Federal Children's Bureau has announced today. The drive will begin on April 6, one year from the day the United States declared war, and the first day of the Children's Year.

Public health authorities agree that half the deaths of young children are easily preventable. Each State will be assigned a definite quota of the hundred thousand lives to save. State councils of defense and the State women's committees are being called upon to be responsible for the State quotas.

Methods of work will be those which have already proved efficient in saving children's lives in the United States and other warring countries.

To inaugurate the Children's Year a nation-wide weighing and measuring of babies and children of preschool age will be made. No such general test of the well-being of children has ever been attempted. It will show each community what its children need if the men of the rising generation are to be free from the physical defects which the draft has revealed.

The plans contemplate economy for every purpose except for the essential means of protecting child life.

The mortality from pellagra in South Carolina during ten months of 1917, ending November 1, was 40.2 per 10,000 population, a decrease from 41.2, an entire point, for a like unit of population for the same period in 1916,according to the figures compiled by the bureau of vital statistics of the state board of health. The number of deaths from pellagra for the 1917 period was 544, compared with 553 for 1916.

Tuberculosis, for the same period in 1917 and 1916, shows a decrease from 111.4 for 100,000 of population to 109.2, in favor of last year. The deaths from the disease in last year's period was 1,480, compared with 1,492 in 1916.

EDITORIAL NEWS ITEMS

Capt. C. W. Collock, of Charleston, S. C., is now attached to the aviation section of the U. S. Army at Philadelphia, Pa.

Dr. W. W. Green of Tarboro, N. C., has been commissioned Lieutenant in the U. S. Army, stationed at Camp Greene, Charlotte, N. C.

Dr. L. L. Hovis, of Charlotte, N. C., is at Camp Dix, Rightstown, N. J. He is a Lieutenant in the Medical Reserve Corps of the U. S. Army.

Dr. J. S. Brown, of Hendersonville, N. C., now has the rank of Major in the U. S. Army, and is now located at the Charity Hospital, New Orleans.

Dr. John Donally, of Charlotte, N. C., is in the medical corps of the U. S. Army, and is stationed at the Walter Reed General Hospital, at Tacoma Park, D. C.

Dr. P. J. Chester, formerly connected with the Charlotte Sanatorium, Charlotte, N. C., has been commissioned Lieutenant in the U. S. Army. He is now at Camp Jackson, Columbia, S. C.

Mr. Joseph L. Turner, head chemist of the Bristol-Myers Company, Brooklyn, has been unanimously elected First Vice-President of the New York Local Branch of the American Pharmaceutical Association.

Dr. J. H. Shuford, of Hickory, N. C., proprietor of the Richard Baker Hospital, has been commissioned a captain in the United States Army Medical Reserve Corps. He has closed his hospital and has already entered the service.

Dr. Wm. deB. MacNider, professor of Pharmacology in the University Medical School, Chapel Hill, N. C., was married on January 23rd, his bride being Miss Sarah Foard. The ceremony took place at the home of the bride's parents at South River near Salisbury.

The Buncombe County Medical Society of North Carolina at a recent meeting elected Dr. Joseph B. Green, president. The Buncombe County Medical Society is one of the best, if not the best county society in the State. Its membership is large and its attendance is always good.

Dr. William Ilderton, a prominent physician of Florence, S. C., was shot to death by a Mr. Hicks, an attorney of that place, on February 8th. Mr. Hicks was Mrs. Ilderton's attorney, and Dr. and Mrs. Ilderton were separated or divorced.

Dr. Ilderton was graduated from the Medical College of South Caorlina, in 1889.

Dr. Robert L. Moore, a very prominent eye, ear and nose specialist of Columbia, S. C., died January 4th, 1918. Dr. Moore was born in McConnellsville, York County, S. C. He was forty-four years of age. After his preliminary education he was graduated from the University of Maryland School of Medicine, Baltimore, Md. Dr. Moore had been practicing his specialty in Columbia for sixteen years.

Dr. W. N. Mebane, a prominent physician of Greensboro, N. C., formerly of Hillsboro, N. C., died suddenly at his residence a few days ago. Dr. Mebane was a graduate of George Washington University Medical School, Washington, D. C., and soon after securing his license to practice medicine in this state, joined the State Medical Society, and was a consistent member of that organization.

Dr. S. Westray Battle of Asheville, N. C., was married on February 7th in New York City, to Mrs. Jane H. Liddell, of Charlotte, N. C.

Dr. Battle is a retired surgeon of the U. S. Navy. He has long been a prominent physician in the city of Asheville and is well and favorably known all over the state. Dr. Battle graduated at the Bellevue Medical College of New York in 1875. He was licensed to practice medicine in this state in 1887 and joined the State Medical Society at the same time. He was elected a member of the board of health of North Carolina in 1899. He was re-elected by the State Society in 1901 and remained in office until 1907. He was considered a useful and honored member of that board.

Dr. and Mrs. Hubert Haywood of Raleigh, N. C., announce the marriage of their daughter, Eliza Eagles Haywood, to Dr. Lewis Nelson West, also of Raleigh, N. C., now Lieutenant in the medical reserve corps of the U. S. Army. The marriage took place at All Saints Church, Atlanta, Georgia, on Friday the 18th of January.

Dr. West is a prominent young professional gentleman of Raleigh, N. C. In 1912 he graduated from Jefferson Medical College of Philadelphia. Soon after receiving his diploma, he was licensed to practice medicine by the board of medical examiners of North Carolina. In 1915 he joined the State Medical Society and it is predicted by his many friends that he will be a valuable member in the medical fraternity in our capital city, and an active and useful member in our State Medical Society.

The North Carolina Orthopedic Hospital.—At the meeting of the last Legislature of this State, an appropriation was made, to spend $20,000 to the building and equipping for the North Carolina Orthopedic Hospital and School, which is to be located at Gastonia, N. C. The selection of Gastonia for an institution of this kind is very appropriate, certainly in as much as the citizens of that thriving city have subscribed $20,000 in addition to the State's appropriation, which gives the institution a starting capital of $40,000. The State, also has appropriated $7,500 annually for the maintenance of this institution.

Mr. R. B. Babbington, of Gastonia, is president of the Board of Directors. It was through his influence and energy and wise direction that this proposed institution has at last been put on a sound basis, and its erection and equipment and maintenance is now a certainty.

Dr. Hennessee Murdered.—Dr. E. A. Hennessee, a well known physician of Glen Alpine, N. C., was shot to death on January 31st, just after he had stepped from a train on his return from the city of Greensboro. Without warning his body was literally riddled with twelve bullet holes. The latest reports indicate that the shooting was done by Garfield Pitts and Aaron Pitts.

The trouble between these men originated eight years ago when Dr. Hennessee and the Pitts family and friends had a great fight in the town of Glen Alpine, in which several people were killed.

Dr. Hennessee graduated from the U. S. Grant University in 1900. He was licensed to practice medicine in this state in 1902 and joined the State Society in 1904. He was considered a competent and reliable physician and his tragic and untimely death is a source of great regret to hundreds of his friends and patrons.

The following announcement has been received from Dr. D. T. Tayloe, president of the Tri-State Medical Association:

The Twentieth Annual Session of the Tri-State Medical Society will be held at Charleston, S. C., February 20-21, 1918. Spartanburg could not handle the convention on account of the terrible overcrowding of the hotels by friends and relatives of the New York regiments camped there.

Charleston meetings are always great successe sin a scientific and social way, and this meeting promises to be the best yet held. An excellent program is assured and many advances of great interest will be discussed by eminent military surgeons and physicians from numerous camps in the three states, especially South Carolina.

Your interest and presence is urged, Doctor, and if you prepare a paper, please send title to your chairman or preferably, to save time, to the Secretary.

The New Charleston Hotel will be convention headquarters ,and you are urged to make reservations early.

Come and bring a new man. The Tri-State is growing rapidly and is of great good to its members.

The Tri-State Medical Association of the Carolinas and Virginia will meet in Charleston, S. C., February 20-21. It was previously arranged that this meeting would be held at Spartanburg, S. C., but on account of the crowded condition of the hotels in that city, it has been recently decided that it would be better to meet in Charleston.

The New Charleston Hotel will be headquarters for the meeting. This is one of the best hotels in the south and the visiting physicians will be well taken care of. It will be well enough, however, to write in advance of the meeting for reservation in this hotel.

The indications are that this approaching meeting will be one of teh best that has ever been held in South Carolina. The program will be very fine, judging from the titles of the papers already received. Several will be presented and discussed by eminent physicians and surgeons from the numerous army camps from the three states, especially South Carolina. The arrangements have practically been made for a special pullman car service leaving Charlotte in the afternoon at five o'clock, February 19th. This car will run through to Charleston, arriving there on the morning of the 20th. This will be a very convenient arrangement for the physicians in western Virginia and western North Carolina.

Preliminary Program of the Tri-State Medical Association of the Carolinas and Virginia.

OFFICERS: SESSION 1918

Dr. D. T. Tayloe, Washington, N. C., President.

Dr. James K. Hall, Richmond, Va., Vice-President.

Dr. Addison G. Brenizer, Charlotte, N. C., Vice-President.

Dr. J. R. Young, Anderson, S. C., Vice-President.

Dr. Rolfe E. Hughes, Laurens, S. C., Secretary-Treasurer.

EXECUTIVE COUNCIL

One Year Term

Dr. James K. Corss, Newport News, Va.
Dr. Edward C. Register, Charlotte, N. C.
Dr. William B. Way, Ridgeville, S. C.

Two Year Term

Dr. Jno. N. Upshur, Richmond, Va.
Dr. J. Howell Way, Waynesville, N. C.
Dr. Julius H. Taylor, Columbia, S. C.

Three Year Term

Dr. E. G. Moore, Elm City, N. C.
Dr. A. L. Gray, Richmond, Va.
Dr. W. W. Fennell, Rock Hill, S. C.

Reporter—Miss Ida Lamb, Charlotte, N. C.

CHAIRMEN OF SECTIONS

North Carolina

Dr. Joseph Graham, Surgery, Durham, N. C.
Dr. E. C. Register, Medicine, Charlotte, N. C.
To be made, Gynaecology.
To be made, Obstetrics.
E. Reid Russell, Eye, Ear, Nose and Throat, Asheville, N. C.

South Carolina

Dr. J. H. Taylor, Surgery, Columbia, S. C.
Dr. H. S. Shaw, Medicine, Fountain Inn, S. C.
Dr. H. R. Black, Gynaecology, Spartanburg, S. C.
Dr. Jos. Maybank, Obstetrics, Charleston, S. C.
Dr. E. F. Parker, Eye, Ear, Nose and Throat, Charleston, S. C.

Virginia

To be made, Surgery.
Dr. Douglas Vander-Hoof, Medicine, Richmond, Va.
Dr. Chas. R. Robins, Gynaecology, Richmond, Va.
Dr. Stephen Harnsberger, Obstetrics, Catlett, Va.
Dr. S. C. Bower, Eye, Ear, Nose and Throat, Richmond, Va.

Wednesday, February 20—10 a. m.

Place of Meeting—Assembly Hall, New Charleston Hotel.

Society will be called to order by Dr. R. S. Cathcart, President of local society.

Invocation—Rev. Alexander Sprunt.

Address of Welcome on behalf of City—Mayor T. T. Hyde.

Address of Welcome on behalf of Profession—Dr. Robt. S. Cathcart.

Response to Address of Welcome—Dr. L. B. MBrayer, Sanitarium, N. C.

President's Address—Dr. D. T. Tayloe, Washington, N. C.

PAPERS

"Medico Political Experiences as a Member of the Red Cross Commission in Roumania"—Dr. R. C. Bryan, Richmond, Va.

"Extension of Service of State Laboratory"—Dr. C. A. Shore, Raleigh, N. C.

"Addisons Diseases—With Report of Cases"—Dr. Ira M. Hardy, Kruston, N. C.

"Paresis"—Dr. W. C. Ashworth, Greensboro, N. C.

"Report of Cases Pyloric and Duodenal"—Dr. F. M. Durham, Columbia, S. C.

"Treatment of Pellagra"—Dr. E. H. Bowling, Durham, N. C.

Dr. Stephen Harnsberger, Catlett, Va.,—subject unannounced.

"Chronic Intestinal Stasis: It's Influence on Achievement"—Dr. Geo. A. Caton, New Bern, N. C.

"A History of the Treatment of Pneumonia in America During the Past Fifty Years"—Dr. Benj. K. Hayes, Oxford, N. C.

"A Clinical Estimation of the Neuro-Psychopath as a Prospective Soldier"—Dr. J. Allison Hodges, Richmond, Va.

"Protecting the Kidney Against the Toxic Effect of Anesthetics and Aiding the Efficiency of Diuretics"—Dr. Wm. deB. MacNider, Chapel Hill, N. C.

"Renal Calculi"—Dr. A. J. Crowell, Charlotte, N. C.

"Radium in the Treatment of Fibroid Tumor Cases"—Dr. Howard A. Kelly, Baltimore, Md.

"Enterostomy"—Dr. Foy Roberson, Durham, N. C.

"Technique of Inguinal Hernia Operations (Lantern Slides)'—Dr. Jno. A. Bodine, New York.

"Multiple Osteo-Myelitis—With Report of Two Cases"—Dr. A. Wylie Moore, Charlotte, N. C.

"A Further Experience with the Operative Treatment of Epididymitis"—Dr. Chas. A. Mobley, Rock Hill, S. C.

"Goitre Surgery"—Dr. A. E. Baker, Charleston, S. C.

"Complete Laceration of the Perineum"—Dr. Southgate Leigh, Norfolk, Va.

"The Surgical Treatment of Pelvic Inflammatory Diseases"—Dr. Geo. Bunch, Columbia, S. C.

"Localizing Foreign Bodies with the Roentgen Ray (Lantern Slides)"—Dr. A. R. Taft, Charleston, S. C.

"An Unusual Case of Stricture of Esophagus in an Infant"—Dr. E. W. Carpenter, Greenville, S. C.

"Nasal Accessory Sinusitis"—Dr. E. Reid Russell, Asheville, N. C.

"The iDagnosis and Early Treatment of Cerebro-Spinal Meningitis"—Maj. W. W. Harrick, Camp Jackson, Columbia, S. C.

"The Present Day Management of Syphilis"—Dr. Parran Jarboe, Greensboro, N. C.

"The Psychic Side of General Medicine"—Dr. Louis G. Beall.

If authors have been omitted or errors made, please notify the Secretary at once. You are cordially invited to be present and participate in discussions.

HOTELS

New Charleston (headquarters), $2.00 up.
Argyle, $2.00 up.
St. John, $2.00 up.
(Reservations should be made early).

Charleston urges your presence, Doctor, and true Carolina hospitality awaits you. The program is a most interesting one. The clinics and entertainments are attractive. There will be distinguished invited guests present.

Sec. 9: "Not more than twenty minutes shall be occupied in reading any paper, except by a vote of the Association. In the discussion of papers, resolutions or questions, no member shall speak longer than five minutes, or more than twice, except on special permission by a vote of the Association."

For further information address D. T. Tayloe, President, Washington, N. C., or Rolfe E. Hughes, Secretary-Treasurer, Laurens, S. C.

D. T. TAYLOE, President.
ROLFE E. HUGHES, Sec-Treas.

BOOK NOTICES

Helping the Helpless, In Lower New York, by Lucy Seaman Bainbridge, Hon. Supt. Woman's Branch, New York City Mission Society, Author of "Round the World Letters," Introduction by Rev. A. F. Schauffler, D. D., New York, Chicago, Toronto, Fleming H. Revell Company, London and Edinburgh.

This book was written by a lady of unusual intelligence and ability, one who has had an abundant opportunity to judge and appreciate the need of such a book as this. She was, for a long time Superintendent of the Woman's Branch, New York City Mission Society. For eighteen years she showed ability and tact in dealing with the different problems attending her office. For this, she had had a great deal of preparation, having gone around the world on a kind of missionary tour inspecting various missionary fields. This experience fitted her peculiarly for the great work that she has accomplished in New York. Mrs. Bainbridge, exhibits marked ability in dealing with individual cases. These characteristics are shown very markedly in the story she has told, dealing with those who are in particular danger, morally as well as physically.

These stories are true to life and cannot fail to fascinate the sympathetic reader. Mrs. Bainbridge is the mother of the celebrated surgeon, William Seaman Bainbridge, of New York, who is now in France doing a great work for the relief of our soldiers. The book contains one hundred and seventy-two pages and is well gotten up by the publishers.

Medical War Manual No. 3, Authorized by the Secretary of War and Under the Supervision of the Surgeon-General and the Council of National Defense, Military Ophthalmic Surgery, by Allen Greenwood, M. D., Major, M. R. C., U. S. A., Recently Honorary Lieut.-Colonel, Harvard Surgical Unit With the Royal Army Medical Corps, British Expeditionary Force, Including a Chapter on Trachoma and Other Contagious Conjunctival Diseases, by G. E. DeSchweinitz, M. D., Major, M. R. C., U. S. A., and a Chapter on Ocular Malingering, by Walter R. Parker, M. D., Major, M. R. C., U. S. A. Illustrated, Lea & Febiger, Philadelphia and New York, 1917.

This is the third book of the Medical War Manual that has been published by Lea & Febiger, publishers.

This hand-book has been compiled with the idea of providing, in condensed form, suggestions that may be helpful to medical officers who have to deal with the special ophthalmic problems which arise in the daily routine of active army medical work, especially in the dressing stations and hospitals throughout the war zone. The surgical methods described have proven their worth in hospitals in the British Army.

The little book has several very fine illustrations, which illustrate many of the conditions of the eye peculiar to war exposure and bad hygienic conditions. The book is thoroughly applicable for the purpose in which it was written.

International Clinics, a Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Paediatrics, Obstetrics, Gynaecology, Orthopaedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and Other Topics of Interest to Students and Practitioners, by Leading Members of the Medical Profession Throughout the World, Edited by H. R. M. Landis, M. D., Philadelphia, U. S. A., with the Collaboration of Chas. H. Mayo, M. D., Rochester, Sir Wm. Osler, Bart., M. D., F. R. S., Oxford, Frank Billing, M. D., Chicago, A. McPhedran, M. D., Toronto, J. W. Ballantyne, M. D., Edinburgh, Arthur F. Beifield, M. D., Chicago, Rupert Blue, M. D., D. P. H., Washington, D. C., John G. Clark, M. D., Philadelphia; James. J. Walsh, M. D., New York; Charles Greene Cumston, M. D., Geneva; Richard Kretz, M. D., Vienna. With Correspondents in Montreal, London, Paris, Berlin, Vienna, Leipsic, Brussels, and Geneva. Volume IV, Twenty-seventh Series, 1917. Philadelphia and London, J. B. Lippincott Company.

This quarterly is one of the best books taht comes to this office for our review. This volume thoroughly maintains the high standard set by preceding volumes. The illustrations are numerous and very appropriately illustrate the text. The binding is uniform and corresponds with the former volume. The book contains three hundred and fourteen pages, very fully and intelligently indexed.

Technic of the Irrigation Treatment of Wounds by the Carrel Method, by J. Dumas and Anne Carrel, Authorized Translation by Adrian V. S. Lambert, M. D., Acting Professor of Surgery in the College of Physicians and Surgeons (Columbia University), New York, With an Introduction by W. W. Keen, M. D., LL. D., F. R. C. S. (Hon.) Paul B. oHeber, New York. Price $1.25.

Alexis Carrel's genius has been shown in many remarkable ways and has already received the hall-mark of a Nobel prize. Dr. Carrel has done and is still doing a great practical service to humanity in perfecting and operating the new and wonderfully successful technic in treating war wounds by means of Dakin's solution. He has amplified the details of this treatment in this little book. Every surgeon in the various military and naval forces, and also those in civil life who have to do with industrial and other accidental wounds should know this technic by heart and practice it with exactness. They will be rewarded by a most gratifying success. We take pleasure in recommending the book.

Progressive Medicine, a Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences, Edited by Hobert Amory Hare, M. D., Professor of Therapeutics, Materia Medica and Diagnosis in the Jefferson Medical College, Philadelphia, Assisted by Leighton F. Appleman, M. D., Instructor in Therapeutics, Jefferson Medical College, Philadelphia, December 1, 1917. Owners and Publishers, Lea & Febiger, Philadelphia, New York, Six Dollars Per Annum.

This volume is some larger than the preceding one, making an unbound volume of four hundred and sixty-six pages, with many illustrations.

Problems of Subnormality, by J. E. Wallace Wallin, Director of the Psycho-Educational Clinic, Board of Education, St. Louis; Author of "Experimental Studies of Mental Defectives," "The Mental Health of the School Child," etc., etc., with an introduction by John W. iWthers, Ph. D., Superintendent of Public Schools in the City of St. Louis, Yonkers-on-Hudson, New York. World Book Company, 1917.

This comprehensive book of the problems offered by sub-normal children, a most important work, will have a special appeal for superintendents of public schools, teachers of classes for defective children, sociologists, psychologists and child welfare workers. (Notice the long biography of the author on page 2567 of the 1916-1917 issue of Who's Who in America, to see why the author is so eminently qualified to write a book on this subject.

The author is at the head of one of the few clinics attached to a public school system. He has evolved the system which is a consistent plan of organizing different types of special classes for different kinds of subnormal children in the St. Louis schools and fully demonstrated the workability of his plan.

A thorough discussion of all the larger educational, social, preventive and eugenic questions involved in the problems of subnormality is included in the volume.

Dr. Withers' introduction calls attention to the timeliness of this book in view of our recent entrance into the great war.

We have looked over this book with a great deal of interest and it certainly gives the reviewer a great deal of pleasure to recommend it to anyone who is interested in these very important problems. The volume is a handsome one, and well indexed.

Pluri-Glandular Insufficiency, Its Frequency and Therapeutic Significance.

This is a booklet of twenty-eight pages, published by Reed and Carnrick, the well known chemists and manufacturers of New York City. We have looked it over with a great deal of interest. Anyone who is interested, certainly a physician should be, ought to read this booklet. It deals principally with Pluri-Glandular Insufficiency, Its Frequency and Therapeutic Significance. The writer deals with the subject intelligently, and accurately.

February Cosmopolitan

Now on sale, has something interesting to offer to every fiction lover.

The foibles of modern society are vividly described in Elizabeth Robins' serial "Camilla"—and "Virtuous Wives"—Owen Johnson's stupendous novel, as contrasted with Lillie Langtry's memoirs of a society of a past generation.

The finest types of American humor and wit are displayed in Ade's "Fable of the Bewildered Maverick and the Conflicting Testimony"; "Jolly Bachelors" by George Randolph Chester—and "Penrod Jashber," Booth Tarkington's new serial following Penrod's career as detective.

Charming tales of youthful love and indiscretion are "The Restless Sex," by Robert W. Chambers; "The Second Choice," a complete short story by Theodore Dreiser, and "Tiger, Tiger!" the latest Henry the Ninth story by Samuel Merwin. But love and beauty-worship have no age limit, and in John Galsworthy's new two-part story, "Indian Summer of a Forsyte," we find the pathos and simplicity of an aged man's longing for beauty.

"On the Trail of the Cowardly Cougar," by Rex Beach is an adventure story that every sportsman will enjoy.

"The Black Cross," by Arthur B. Reeve, is a rattling good detective story.

Get "The Diary Habit." You will after reading Arnold Bennett's interesting article. Hooverize with Herbert Kaufman—"Stop Eating Soldiers!" and you who are forever on the lookout for the ideal mother, will find your answer in "Good Mothers," Ella Wheeler Wilcox's latest poem.

For over thirty years Tongaline has been successfully prescribed by thousands of physicians in the treatment of rheumatism, neuralgia, grippe, gout, nervous headache, sciatica, lumbago, malaria, heavy colds and excess of uric acid.

Miscellaneous.

Renal Function in Pulmonary Tuberculosis.—C. W. Mills and J. T. Henderson, of Loomis, New York, in the December number of The American Review of Tuberculosis, reports studies of the renal function in cases of pulmonary tuberculosis.

In the first series excretion and retention tests were done in forty-four cases. Rountree's and Geraghty's phenolsulphonephthalein test was done in forty-three. An excretion of 60 per cent. or more in two hours was considered normal. The lactose excretion test of Schlayer was done in nineteen. Schlayer's technique was followed and urine specimens obtained later than six hours after the administration of the drug showing a positive sugar test were regarded as abnormal. Blood urea and urinary urea were determined by Marshall's method. Ambard's coefficient was determined. By none of these tests could any serious defect in kidney function be found. All of the cases except ten, even when far advanced, febrile and unfavorable, and with albumen and casts in the urine were normal. In most of the ten exceptions the abnormality was only slight. From this series of forty-four cases it is concluded that pulmonary tuberculosis even when far advanced and unfavorable is not accompanied by any disturbance of renal function of sufficient grade to be detected by the excretion or retention test employed. Only when the pulmonary disease is complicated by clinically determinable disease (chronic nephritis and renal tuberculosis in our cases) is renal function disturbed.

In the second series forty-three cases were tested by means of Mosenthal's three meal diet. The urine was collected at two hour intervals from 8 a. m. to 8 p. m. and the total night urine from 8 p. m. to 8 a. m. On each of these specimens a determination of the amount (water secretion) and the specific gravity was made. The sodium chlorine in the total day and night specimens was estimated by Volhard's method. No nitrogen determinations were attempted. Most of the patients of this series were far advanced unfavorable pulmonary cases with traces of albumin and casts. A few with clinical evidence of nephritis or renal tuberculosis were included. In studying the results of the criteria of Mosenthal rather than those of Hedinger and Schlayer were followed. The cases may be divided roughly into three groups according as the tests show normal, slightly disturbed or markedly disturbed function. In the group of normals three had albumen and casts, thirteen only a trace of albumin and hyaline casts and three had normal urine. Those with slight disturbance showed clinically one chronic nephritis, four albumin and casts, four a trace of albumin and hyaline casts and two a normal urine. Those with marked disturbance in function showed clinically three nephritis, two terminal oedema, five genito urinary tuberculosis, and three a trace of albumin and hyaline casts. In other words the cases of marked disturbance of function are all, except three, cases which have definite clinical evidence, aside from albumin and casts, of renal disease. Where albumin and casts were the only renal abnormality two-thirds of the functional tests were normal and the other third, except for three cases, showed only slight departure from normal. Classifying the cases from the standpoint of their tuberculosis into four groups of afebrile favorable, afebrile unfavorable, afebrile and unfavorable and febrile unfavorable, and excluding cases of nephritis and renal tuberculosis it would seem that the more pulmonary disease, the more apt is there to be a lowering of the renal function. This lowered function, however, is usually of only such slight grade as to be of little significance. Fever appears to have no effect on kidney function according to this test.

The authors conclude that in tuberculosis work it would hardly be worth while to add these tests to the regular routine. In cases where there is a suspicion of nephritis and in genito urinary tuberculosis they afford very valuable help. Mosenthal's test is the most delicate and should have the preference. Of the others phenolsulphonephthalein is the most valuable.—Mills, Charles W., and Henderson, John T.: The Effect of Pulmonary Tuberculosis on Renal Function, Am. Rev. Tub., 1917, i, 10.

Conservation as the Doctor Sees It.

The conservation of meat is urged for reasons of health, no less than of patriotism.

The time is passed when intelligent people give the baby a piece of fat bacon to suck, and feed themselves on food soaked in grease; they would be horrified by a suggestion so frought with the idea of the slums and the mountain fastnesses of Kentucky. But in metropolitan restaurants and dining rooms they still include in a single meal such foods as oysters, fish, game, roast, and cheese. "One-half the people in Christendom," according to Dr. Henry Smith Williams, the distinguished scientist and physician who contributes the "Science" section of Hearts's Magazine for February, "shorten their lives by over-eating or by perverse eating." And most of this perversity in the American diet takes the form of an over supply of animal protein. Just how dangerous this kind of gormandising can be is shown by the fact that 350,000 deaths in the United States each year can be traced to this cause—an increase of forty per cent. in the last twenty years. The study of the faults and the remedies of the American dietary is especially valuable at this time of the urging of conservation for the sake of national welfare. The appeal of the Food Administration is reinforced by the judgment of a medical expert, whose evidence and conclusions no one can afford to ignore.

The Diseases for Which Man Blames the Beasts.

Although animals are not affected by the sicknesses and communicable diseases of man, yet, for some unexplainable reason, the scientists and physicians declare that a whole host of ofttimes fatal ailments of mankind are traceable to the beasts, says The Popular Science Monthly for February. The horse is blamed for spreading glanders, rabies, lockjaw and other diseases of five or more syllables. Dogs and cats are branded as the circulators of rabies, parasitic worms of different kinds, fleas and ticks. The cow is the worst offender. The list of diseases laid at her barn-door is headed with tuberculosis and grows constantly more blood curdling, until we wonder why physicians and scientists consent to the use of milk, butter and cheese which still lead the dietetians' list of nutritives.

Rats, squirrels and fleas spread the bubonic plague. We are prepared to believe that lice and bedbugs, flies and mosquitoes are the rapid transit lines for yellow fever and malaria. We are willing to forego the luscious oyster all the year round, if need be, to avoid typhoid fever. It will go hard with many of us, though, if the fish-day diet must be cut out on account of the possibility of tapeworm which the scientists say fish food carries.

Wounds of the Spleen.—Fiolle (Paris Medical), states that the diagnosis of splenic wounds is always difficult, as the clinical signs are variable and at times paradoxical. It is a mistake to think that early signs of internal hemorrhage must necessarily follow. Almost never, in the first few hours after the injury, is there the least sign of bleeding, unless there is a crushing injury with tear of the pedicle, causing death within a short time. On the second to the sixth day, as a rule, the pulse suddenly becomes frequent and weak, signs of anemia become marked, and the subject unexpectedly succumbs. Dullness in the splenic region or lower in the abdomen due to blood is inconstant and difficult to make out. Some splenic wounds exhibit symptoms of peritonitis and simulate trauma of the alimentary tract by causing sharp pain, abdominal muscular spasm, weak pulse, pinched features, oliguria, and retention of feces and gas. The diagnosis is best based on the nature, site, and direction of the wound. Radioscopy is significant if it reveals a foreign body that has penetrated to a depth of seven to twelve centimetres from the posterior wall. Even in doubtful cases and in the absence of anemia, celiotomy is indicated, lest the subject, apparently in good condition, suddenly succumbs to hemorrhage. The only possible contraindication is the added presence of injuries of other organs so extensive as to imply certain death. The incision should vary according to the site of injury and the probable injuries to other organs. Fiolle has had good results from a posterior incision following the eleventh and twelfth ribs. Splenectomy should be effected whenever practicable. Packing is a makeshift measure, and suture is to be avoided, even where the splenic wound is very small.

Lumbar Puncture in War Surgery.—Willems and Albert (Presse Medicale), believe more attention should be paid to this procedure than has hitherto been the case. Not only is it of diagnostic value in trauma to the skull without apparent external wound, alone supplying information as to whether simple concession exists or there is a basal fracture, but in simple hypertension in the cerebrospinal system it is curative. Likewise in fracture of the base it constitutes the best means available of decompressing the base of the brain. In grave cases twenty to forty mils of cerebrospinal fluid should be removed daily. In Jacksonian epilepsy known to be due to brain irritation by a missile, bone fragment, exostosis, or scar, surgical removal of the irritant body is the only logical procedure, but where the origin of the condition is obscure, lumbar puncture is a valuable measure, causing the convulsive attacks to become less frequent and finally to disappear entirely. For the reduction of an incipient cerebral hernia, nothing succeds as well as lumbar puncture, the hernia subsiding entirely if plenty of fluid is removed at the first puncture. Upon repeated daily puncture, the hernia will be observed to become gradually smaller and less tense, and after eight or ten days it will disappear. It may reappear later, but another course of punctures will then overcome it again; by way of prophylaxis, the opening in the skull should be closed after the first successful series of punctures. In posttraumatic menigitis and meningoencephalitis, repeated copious lumbar evacuations are of actual curative value, especially if combined, where the occasion presents, with intraspinal antistreptococcic serum therapy.

Detection and Treatment with Emetine Bismuth Iodine of Amebic Dysentery Carriers Among Cases of Irritable Heart.—Jepps and Meakins (British Medical Journal), in a report to the Medical Research Committee state that amebic dysentery was found to be either a direct or aggravating cause of irritable heart among soldiers returned from the Mediterranean Force. Their investigation was in the determination of cases of carriers among these soldiers and an attempt to cure them. From October, 1916, to February, 1917, an examination of the stools of all suffering from irritable heart from the Mediterranean Force admitted to the Hampstead Military Hospital was made, with no selection of men was made with reference to the presence or absence of a history of disentery. Microscopic examinations of stools were made in the usual way and six careful examinations of at least each man was done before he was discharged as uninfected. Sixty-five cases were examined. The Entameba histolytica was detected in twenty-four cases, the Entameba coli in thirty-two cases, the Lamblia intestinals in twenty cases, the Chilomastix mesnili in three sases, and the Trichomonas hominis in one case. The treatment by the use of emetine bismuth iodine was carried out by the employment of the drug in three different ways. When given in a powder this drug causes nausea and vomiting, so it was administered in tablet and pill form and was either mixed or coated with some material supposedly in the stomach. In all twenty-three courses of treatment were given with these preparations. No nausea or vomiting was produced, but in eight cases severe diarrhea and abdominal cramps occured. Some looseness of the bowels was observed in all the cases where the drug appeared to have any action. In the treatment with the stearine-coated tablets there were eight cures out of twelve cases treated, or 66 per cent. With the second, the stearine-coated pills with resin ointment basis, there were no cures, while with the third, another form of stearin coated tablets, there was only one cured out of four cases treated, or 25 per cent. Then the emetine bismuth iodide was given in cachets of 3 grains each to eleven cases. Ten cases, or 91 per cent., were cured after twelve daily doses. Jepps and Meakins found as the result of this detection and treatment that (1) additional infections with intestinal protozoa may be detected at the sixth and later examinations: (2) infections of E. histolytica in which no cysts measuring over 10m in diameter are found in the stools are far from uncommon; (3) the use of emetine bismuth iodide has cured a large proportion (95 per cent.) of the amebic dysentery carriers; (4) the best method of administration of this drug is in the form of the loose powder in cachets in daily doses of 3 grains. At least 36 grains should be given in all; (5) symptoms of irritable heart in amebic dysentery carriers are reduced in a large number of those patients who have been cured of the amebic infection; (6) infection with intestinal protozoa has no marked effect on the differential leucocyte count.

Artificial Pneumothorax and its Value in the Treatment of Pulmonary Tuberculosis.—Crocket, in The Glasgow Medical Journal, states he has given nearly 700 injections, and only on one or two occasions has he had cause for anxiety. The first occurred about an hour after the injection. The patient became very cyanosed; the pulse weak and rapid; the temperature, from being normal, rose to 102.5 deg. There was some respiratory distress. The urine, normal previously, showed the diazo and the Moritz Weiss reactions. There was some pain on the side where the injections had been given.

Stimulants were given, and fomentations applied, and the patient came all right. A few days later he found the filters soaking, and thought it might have been due to some antiseptic fluid being passed over from the cylinder when the injection was nearly finished. The doctor at that time used mercury bichloride in the water.

In the second case, 1700 c. c. of air had been injected for the purpose of checking a hemoptysis, which had resisted every other form of treatment. The patient did not complain at all during or immediately after the operation, but half an hour later, probably on account of the gas expanding, as it became heated in the chest cavity to the temperature of the body, and therefore a gradually increasing pressure resulting, the heart became seriously embarrassed. The patient became very cyanosed and gray. Her extremities were cold, the pulse was not perceptible at the wrist, and the breathing was very rapid. A needle was rapidly inserted into the pleural cavity and decompression followed. Strychnine was injected and fomentations applied, and the foot of the bed raised. The patient did well, and at the present time is in very good health.

In several cases a pleural effusion has resulted. Occasionally it has been a very small amount, and only discovered fortuitously by X-ray examination. Crocket has found this at no time to be a serious complication. It is a very rare thing for this effusion to be transformed into an empyema, although tubercle bacilli can generally be found in the fluid by inoculation. All his cases that developed this complication did very well. In two cases, after the effusion, Crocket ceased the induction of pneumothorax. The fluid acted as a splint, and further injections of gas were not required. In several cases he has withdrawn a little of the fluid, and at the same time injected more gas. This procedure seemed to aid the absorption of the fluid.

It is absolutely essential before beginning this treatment to obtain the consent and hearty co-operation of the patient. Without these the attempt to induce a pneumothorax should not be made. The treatment is one that may occupy not only many months but several years, and one may have to wait till six or eight injections have been given before definite indications of real improvement manifest themselves. It is interesting to note that one of the striking things that is observed, as the patient begins to improve, is the disappearance of tubercle bacilli from the sputum after repeated examination. The writer has had a large number of cases which previous to injection showed always numerous tubercle bacilli in the sputum, and shortly afterwards failed to show any. Saugman, it may be stated, noticed thta in 50 per cent. of his cases. One does not always notice an immediate increase of weight in those patients who are doing well. One patient gained over a stone. Several, however, remained stationary. In one case the weight fell. In this instance the patient had been gradually increasing in weight ,although the lung disease was extending and becoming more active. She improved very much ultimately as a result of the treatment.

The reason why artificial pneumothorax should be so very helpful is uncertain. The probability is that the collapse of the lung and the continued pressure on it by the air injected has the effect of resting the diseased part, and allowing the lesions to heal by cicatrization, while the other lung, for the time at least, is in a condition of hyperemia which helps in its recovery should it also be affected with the disease, as it almost invariably is.

There is no doubt that in this method of treatment physicians have a means of benefiting a class of patients that previously no power on earth could help. Unfortunately the percentage of unilateral cases that are really ill enough to submit to a prolonged and troublesome course of treatment is small, and these, too, often defer their consent to what they consider a drastic measure till it is too late. He is convinced that if attempted before the disease has become disseminated too widely, and before the toxemia has reduced the general condition too low, and if carried on for an indefinite period, many lives, otherwise hopeless, would be saved.

The Immediate Effect of Cigarette Smoking on Healthy Men and on Cases of "Soldier's Heart."—Koeford, in The London Lancet, makes a report from studies on inhalers and non-inhalers. He states that:

1. The immediate effect of cigarette smoking upon the circulatory system and upon the breathlessness of exertion was observed in 30 smokers, of whom 20 were cases of "soldier's heart" and 10 were healthy soldiers. Each subject smoked either four or five cigarettes during a period of forty minutes.

2. A demonstrable effect was recorded in 17 of the 20 patients; the three un-

affected were non-inhalers. Nine of the ten controls, all inhalers, were influenced in the same fashion, though not to the same degree.

3. he average pulse-rate among the patients during smoking was nine beats higher than before smoking; in the healthy controls it was six higher. Initial slowing of the heart was never observed, nor any irregularity referable to smoking.

4. The rate of respiration in the patients was unaffected; in the controls it was slightly reduced.

5. The average systolic blood-pressure was raised by 5 to 10 mm. Hg. and the diastolic by 5 mm., both in patients and controls.

6. These effects appeared within five minutes; with the first cigarette they almost reached the maximum, and this was maintained throughout the smoking period.

7. A simple exertion test was performed before smoking and repeated on its cessation. In the patients the pulse-rate maintained a higher level throughout the test after smoking, and half of them were more breathless both subjectively and objectively. In two patients precordial pain was induced by smoking, apart from exertion. But in the controls the pulse-rate curve during exertion was much the same after smoking as before, and breathlessness was induced in two only.

8. These observations show that, in health, the smoking of a single cigarette usually raises the pulse-rate and blood-pressure perceptibly; and these effects are a little more pronounced in cases of "soldier's heart." Moreover, the smoking of a few cigarettes can render healthy men more breathless on exertion, and manifestly does so in a large proportion of these patients.

9. Excessive cigarette smoking is not the essential cause in most cases of "soldier's heart"; but, in the opinion of the writer it is an important contributory factor in the breathlessness and precordial pain of many of them.

Closure of Wounds in Home Hospitals.—Phillips, in The London Lancet, says that most of the wounds have already been opened up and many have previously been treated by the Carrel method. Nevertheless the majority are heavily infected and are suppurating. Where there are pus pockets, loose pieces of bone, of foreign bodies the wound should be opened up and thoroughly cleansed under anesthesia. The Carrel method of treatment should then be applied and cultures taken every fourth day until two reports of an average of less than three organisms in a microscopic field have been obtained. In flesh wounds the skin about the wound is then cleansed in the usual way as for an operation, the patient given a general anesthetic and the wound area further sterilized with 1:500 binodide of mercury in alcohol. The edges are trimmed evenly all around for less than a quarter of an inch, all scar tissue is carefully cut away, the skin edges undercut, bleeding vessels tied, large raw surfaces of muscle closed by suturing the deep fascia after having been thoroughly rubbed with bismuth, iodoform paraffin paste, and the skin and deeper layers closed by interrupted sutures of thick, No. 5 pedicle silk which has been boiled and soaked in tincture of iodine for twenty-four hours. The closure is made so that no dead space is left, and if necessary tension may be relieved by a deep suture which is a combination of a mattress and plain suture. The skin edges are finally brought together properly by a continuous catgut suture. The suture line is rubbed with Moynihan's cream and a simple dry gauze and wool dressing is applied. Moynihan's cream is a thick paste of bismuth subcarbonate in a 1:1,000 solution of binoiodide of mercury. The dressing is not touched for two weeks. It is then removed, the wound surface cleaned, another dressing applied and allowed to remain for a week, when it is removed and the stitches taken out. Seven or eight out of every ten wounds will have healed by first intention, one or two will have gaped a little and one will be a failure. In compound fractures of long bones Rutherford Morison's method is adopted and in compound fractures of small bones the Carrel method is followed.

The Suitability of the More Soluble Salts of Quinine and Cinchonine for Intravenous Injection.—Rogers, in The British Medical Journal, records experiments on animals, but states that owing to the lack of clinical material under his control he has only been able to try quinine intravenously in a very few cases of malaria. So far he has only given the bihydrochloride and the acid hydrobromide in ½-gramme doses once a day for three or four days, but without observing more rapid disappearance of the fever and of the parasites than after quinine by the mouth, so larger doses will evidently be necessary if all the parasites are to be rapidly destroyed. As three grains of the bihydrochloride contain as much quinine as four of the acid hydrobromide, after commencing with ½-gramme doses to ascertain whether the patient has any idiosyncrasy toward the drug, up to 12 grains of the bihydrochloride or 16 grains (approximately 1 grm.) of the acid hydrobromide, in 7½ and 10 c. c. respectively of normal saline (making practically 10-per cent. solutions), may be given once daily for at least four days. It will probably be advisable to supplement the intravenous doses with quinine by the mouth, as the former is likely to be rapidly excreted through the kidneys—a point Rogers is now investigating. In any case prolonged oral administration should follow the more active intravenous medication.

Once the resistant relapse-producing stages of the malarial parasite have been produced intravenous quinine is not so likely to be so effective, but the vigorous treatment of primary attacks of malaria by intravenous quinine appears to be worthy of careful trial to ascertain if the frequency of subsequent relapses can be reduced. Military hospitals in malarial areas should afford much more favorable opportunities for following up cases sufficiently long to enable this suggestion to be tested than civil practice. A further material advantage of such early intravenious administration is likely to be that dangerously large infections, which may terminate at any moment in fatal coma under oral administration of quinine, are likely to be rapidly controlled, and the present mortality from malaria to be reduced to practically nil.

Acute Syphilitic Meningitis,—Kinnier Wilson and Gray (British Medical Journal,) review the literature of this little recognized complication or manifestation of syphilis and add the report of the case of their own observation. They point out that this form of meningitis as well as the tuberculous form and that the differential diagnosis may prove extremely difficult. Syphilitic meningitis of the acute form may occur as an exacerbation in a case of congenital syphilis; it may develop during the secondary stage of acquired syphilis with or shortly after the eruption; or it may occur in the tertiary stage. In the first and third types there are usually other evidences of syphilis, but in the second these may be wholly wanting. Such was the case in the patient coming under observation, who presented the history of a fairly rapid onset and the clinical picture of an acute cerebrospinal meningitis, except that he had no fever. The course of the disease led to the suspicion of incorrect diagnosis, for there was no fever at any time; intraspinal injections of meningococcal serum did not bring about improvement; the condition remained stationary, neither improving nor progressing; and the spinal fluid was primarily not turbid and it never grew any organism. A spinal fluid Wassermann was negative, but a short while later a second test of both spinal fluid and blood proved positive. The injection of antimeningococcic serum produced an increase in the cells in the spinal fluid and a change from a lymphocytosis to a polynucleosis which further confused the primary diagnosis. Under vigorous antisyphilitic treatment with mercurial inunctions and intraspinal mercurialized serum the patient made a perfect and rapid recovery.

Bacteriological Examination of the Blood in Irritable Heart.—Grace Biscoe and Lyn Dimond (British Medical Journal), call attention to the fact that several observers have reported finding organisms in the blood of cases of irritable heart. They made two series of observations, in the first of which they also obtained a number of positive cultures. They were subsequently able to determine that most, if not all, of these were due to contamination. A second series of cultures was therefore undertaken with an improved technic, and one which had been shown to eliminate practically all danger from contamination. In this second series, which included ninety-six observations on forty-three cases, all of the cultures remained sterile, except a few which later became contaminated from the air when the flasks were opened. It was concluded that there was no evidence of bacteriemia in cases of irritable heart.

In addition to these Alcresta Tablets of Ipecac, as this product is known, Eli Lilly & Company, the manufacturers, have recently added to their extensive line, an ipecac laxative tablet called Ipelax—a combination of the usual A. S. & B. with the addition of the equivalent of five grains of ipecac in each tablet, a dose heretofore quite unusual in a tablet without an enteric coating.

Trench Foot.—Haydon (Journal of the Royal Army Medical Corps), notes that 240 cases of trench foot were admitted to the hospital during December, 1916, and January, 1917. Class one represented those who had almost recovered from the effects of exposure to cold. The feet were normal except for tenderness and aching at night. Warm foot-gear and rest in the hospital cured them. Class two represented slight cases which would be fit for duty in a few month's. The legs were swollen following prolonged cold and wet. The swelling lasted for some days. As the swelling subsided severe pain described as rheumatism was felt in the legs. Walking was only possible with pain and difficulty. Boots could not be borne. The appearance of the feet and legs was almost normal. The general condition was unaffected. Class three represented cases with local gangrene of toes or toes and heel, but without constitutional disturbance. The toes were in some cases ultimately lost. Even beyond the area of gangrene there was no impairment of circulation.

Class four represented the septic cases, and all had more or less constitutional disturbance. There was gangrene often with extensive cellulitis. Loose stockings seemed most serviceable for these slight cases, over layers of wool ,and foot coverings made of thick, warm, soft material, which came well above the ankle. Time is an essential factor in the cure of the pain and tenderness.

As to the gangernous cases there is never any justification for immediate amputation. Conditions always improve after rest in the hospital. When the toes alone are gangrenous, with little assistance by way of operation they come away at the metatarso-phalangeal joints and healing takes place, resulting in a useful foot. It is interesting to note that open ether was used as the anesthetic as long as the lungs were healthy, being preceded by an injection of morphine and atropine. The site of amputation after shaving the limb was washed with ether soap, and then with ether. When quite dry it was painted with 2 per cent. solution of iodine in rectified spirits. Ten minutes injected with a 4 per cent: solution of eucaine. In some cases the skin and muscles just above the operation area were injected with the same solution. Two and a half pints of normal saline were infused either subcutaneously or intravenously at the time the operation was taking place. In some cases intravenous antiseptics were added to the infusion, and subcutaneous injection of thirty cubic centimeters of polyvalent antistreptococcal serum was given.

As to prophylaxis, he states that loose-fitting boots should be worn over thick, warm socks. Moreover the feet should be kept clean, and regular physical exercise is indicated to retain the tone of the vascular system. It is stated that the wearing of puttees predisposes to frostbite since they constrict the legs, more especially when they become damp and the material shrinks. In many. of the worst cases admitted puttees have been worn.

The perusal of the article suggests that the author is a profound believer in the doctrine of "doing everything."

Prostatic Enlargement and its Treatment.—An experience of prostatectomy extending over some twenty-three years and giving somewhat ample means of testing various methods has led Dr. J. H. Nicoll, M. D., to the conclusion that picemeal prostatectomy by the suprapubic route gives the best results. This method is also practised by Mayo, Robson and Fuller. By this method the whole prostate, with the exception of the pseudocapsule, is easily and speedily removed. Further, the damage to the urethra, sphincter and vesical floor is reduced to a degree not attainable by any other method. In the operation, the two lateral lobes are removed separately, to one of which a "middle lobe" is often attached. The "middle lobe" may have to be removed separately and may be found to consist of several aderomatous outgrowths. A metal catheter should be left in situ during the operation. Bladder lavage after operation, when the ureters are dilated, is apt to wash debris up the ureters and cause pyelitis, and in consequence is contra-indicated. It is as well to warn the patient that he may have rigors after the normal micturition is established, and that later he may pass small portions of phosphate debris with accompanying pain and slight haematuria.—The Medical Journal of South Africa.

There is not an organ or function of the body which may not be impaired or affected by grippe as to lead to a permanent disability, but on account of the extraordinary eliminative action of Tongaline, this rarely occurs if that remedy is used, since there is then no opportunity for such an accumulation of the poison as to induce permanent harm."

Women's Hospitals in France, Serbia, and Salonica.—McIlroy writes in The Glasgow Medical Journal, concerning the work of a unit of the Scottish Women's Hospitals in France, Serbia, and Salonica. She says that various methods of treatment for dysentery were tried in Salonica. As it was of the bacillary form emetine was useless. Enemata of tannic acid, or Condy's fluid were given, also saline transfusions, but it was finally decided that the administration of drachm doses of sulphate of magnesia hourly until all trace of blood or mucus had left the stools was the most successful. Barley water was given by the mouth, with occasional administration of meat juice later. No milk in any form was given until convalescence was reached. If the stools were frequent and exhausting, the sulphate of magnesia was suspended for a few hours, and a small dose of morphine was given to insure sleep. This treatment was found to be the most efficacious of all employed. Cases of para-typhoid, epidemic jaundice, and other diseases with gastrointestinal localization were also treated in the hospital. During the whole summer attacks of diarrhea were prevalent among the armies and also among the hospital staffs, and it was with great difficulty that the work of the various units could be maintained. No published conclusions have been arrived at as to the origin of this diarrhea. The water supply of the armies was boiled or chemically sterilized. That it was an airborne disease may justify consideration, a snew arrivals sometimes became infected when kept in the harbor in ships for several days before landing. The extreme heat and the prevalence of flies bore a considerable part in its maintenance as it disappeared with the onset of the colder weather.

During the late summer the climatic conditions were more favorable and the health of the armies became excellent. Sand fly fever was almost the only disease experienced, but the attacks were of short duration. The symptoms resembled those of influenza, with headache, rise of temperature, aching joints, and a peculiar pain across the diaphragm. Treatment by sodium sulphate and aspirin was very successful in its cure.

In the autumn of 1916 an advance of troops took place in all the fighting front, and wounded began to pour into the hospital. During the whole winter and spring the hospital was full of surgical cases of very great interest. Much time was spent over accurate localization of projectiles in the tissues, and in this way much saving of tissue was obtained at operations, as division of muscles was rendered unnecessary when foreign bodies were accurately located. The cases were received from the firing line about twenty-four or forty-eight hours after injury. In some of these sepsis had already commenced, more especially those of the knee or elbow joints. The limb with its shattered tissue was cleaned up by immersion in saline baths before operation. Immediate operations on admission were not found advisable, unless in special urgent conditions. In this way the patient got over the shock and fatigue of the journey, and the after-results of the operation were more favorable. On arrival the bedridden cases were undressed and bathed in the wards on a bed protected with blankets and waterproof sheeting. Their clothes were immediately placed in a labeled sack and carried to the vestiaire to be disinfected, washed, and mended, and were only given back to the patient on his evacuation. Wounds were dressed immediately and the patient was permitted to sleep after being fed. Patients requiring urgent operations should be attended to in the clearing hospitals and should not be sent down to the base in a condition requiring immediate operation on arrival. The journey to Salonica through Macedonia from the front is difficult and arduous and the wounded arrive in a state of fatigue. After rest the patient is taken to the X-ray department, where the diagnosis and localization of projectiles and fractures are made. Operations are arranged for according to the urgencies and necessities of the condition.

Indisputable Authoritative Evidence.

Hayden's Viburnum Compound is compounded from remedies of acknowledged therapeutic value and so acclaimed by the leading therapeutists of this country.

The therapeutic action of its principal ingredients is attested to and so stated in recognized text-books upon Materia Medica and Pharmacology.

A recent brochure just issued by the New York Pharmaceutical Company, Bedford Springs, Bedford, Mass , presents not only those conditions in which Hayden's Virburnum Compound has proven to be of particular service, but also an abstract from leading authorities attesting to the therapeutic activity of its principal component parts.

A card addressed to the above named firm will bring you this booklet.

Endocarditis Lenta.—Debre (Presse Medicale), points out the relative frequency of this condition, as yet insufficiently recognized in textbooks. Errors of diagnosis and prognosis are still commonly made in relation to it. The inci- to 1,000 beds and that in France to 500. dence is greatest in adolescents and young adults and there is almost invariably a history of rheumatic fever in childhood. The onset is insidious, being marked by gradual loss of strength and power of endurance, anorexia, loss of weight, feverishness and chilliness at irregular intervals ,and anemia, a group of symptoms often ascribed by the patient and his relatives to a "grippy" sore throat or bronchitis. Frequently there are joint and muscle pains; several joints may even become hyperemic and swollen. Soon after certain signs are likely to appear which will permit of definitely diagnosing the condition. Among them, skin manifestations are of primary importance, chiefly purpura and erythema nodosum; the latter condition, if met with at the finger tips, is especially suggestive. Splenic enlargement is another important sign, though at times it leads to confusion with pernicious anemia or malaria. Cardiac examination will reveal a valvular lesion, usually mitral; the physician should not be deluded, upon noting that the murmur remains unchanged at successive examinations, into believing the lesion at a standstill. Blood culture, if it reveals a streptococcus, clinches the diagnosis of slow, malignant endocarditis. Additional manifestations of the disease are, a masklike brownish discoloration, visual disturbances, subacute nephritis, and tachycardia, with or without arrhythmia. The chief complications, usually the ultimate cause of death in these cases, are embolism and arterial aneurysm, leading to brain softening, apoplexy, or coronary blockage. The total duration of the disease is, as a rule, from six months to one year.

"I have used Tongaline constantly since I began to practice medicine and it has proved one of the most reliable remedies with which I have had any experience. At this place where thousands of syphilitics and rheumatics come each year, I prescribe Tongaline every day, because it combines so perfectly with most any drug and it is especially useful as a vehicle for potassium iodide, rendering the stomach more tolerant and furnishing a valuable adjuvant to the effects of the iodide."

Resuscitation of the New-Born Infant by Heart Massage—Fisher (British Medical Journal), says that he has had some experience in midwifery, having attended over 2200 cases in thirty-five years, he has not before this come across an instance in which he has been able to revive a child when the heart impulse had ceased.

The labor was one in which the head was delayed by a very deep perineum in a primipara. Chloroform was used and delivery completed by forceps, the perineum being torn to the anal margin. No time was lost in abstracting the child. The child was more white than blue. Artificial respiration was of no use even after blood had been allowed to flow from the cord.

He had read lately of a successful case of heart massage performed in an operating theater by incising the epigastrium and massaging through the diaphragm, and as there was not any heart-beat at all, he tried massage.

The doctor pressed his right fingers deeply into the left epigastric region, and pushed them right under the ribs, invaginating the belly wall, the left fingers pressed into the chest about the left nipple, and he was able to grasp the heart. Fisher tried to make his two sets of fingers meet by repeated quick thrusts, and after five or six the heart started beating. In about one or two minutes it was fairly established, and then ordinary artificial respiration caused the child to breathe in about five minutes; keeping it up Fisher got a good cry before ten minutes had gone by. The child never had a throwback afterwards, but bruising showed itself where his fingers had pressed in the skin.

As a rule, one finds a heart-beat in these cases, and continues artificial respiration as long as a heart flutter can be detected. Hitherto, if that heart flutter had ceased, one has considered that no more can be done. He is convinced that heart massage as described will most probably set the heart going again, and then artificial respiration will complete the process.

Whether the cardiac was due to the chloroform Fisher cannot say. Certainly the mother did not have an overdose, as she was sufficiently "round" to implore him to save her child.

In the treatment of colds, therefore, "Gray's" can be relied upon to raise the defensive forces of the organism and fortify it against germ attack.

A Specific for Every Pathogenic Microorganism.—Dr. Edward H. Ochsner of Chicago, at the St. Augustine meeting of the Southern Surgical Association, said that the idea of a specific in medicine was not so very new, as both homeopathic and eclectic medicine were built up, at least in part, on this theory. The application of the theory in those instances was, however, premature as the etiology of disease was not sufficiently understood at that time. Today with our more accurate knowledge of infections, the theory was not only sound, but its application in these conditions was feasible. Every wild beast had its deadly enemy; every plant its parasite, and every parasite its parasiticide; and almost every known chemical poison had its chemical antagonist and probably also its physiological antidote. If the abve statement was true, it should be possible to find a specific for every pathogenic micro-organism which should not be harmful to the human host, but when we consider the different species of pathogenic micro-organisms it was not likely that we would ever find a universal germicide. He took up the different pathogenic bacteria, such as the gas bacillus, colon bacillus, gonococcus, such as the gas bacillus, colon bacillus, gonococcus, Spirocheta pallida, surgical tuberculosis, tetanus, etc., and discussed the remedies that had been found most effective by other surgeons as well as himself in the treatment of these various infections. In actinomycosis, removing the foci of the infection, such as diseased tonsils, teeth, beards of barley or chaff of grain, then laying open the sinuses to the very tips and giving the patient sixty grains of potassium iodide for three days, followed by an interval of four days, and then repeating, as first suggested by veterinarians in the treatment of lumpy jaw in cattle, had resulted in the cure of every case which he had under treatment. It was quite essential that all the above things be done carefully and conscientiously. He had seen a number of cases in which one or the other of the above directions were neglected. The disease persisted for months and was relieved only when they were all systematically employed. Giving the potassium iodide in large doses followed by an interval of suspension of the drug seemed quite an important item in securing prompt and permanent relief. In regard to the merits of Dakin's solution, he said that while in certain forms of saprophytic infection Dakin's solution might be of value, he considered it useless in some of the infections and even positively harmful in others.

The Brain in Shell Shock.—Mott (British Medical Journal), was able to study microscopically the brains from two cases of apparently pure shell shock. In both cases the brain showed marked macroscopic signs of congestion with many small ecchymoses on its surface. Microscopically one of the cases showed a generalized early chromatolysis, more or less marked signs of exhaustion of the kinetoplasm, congestion of the vessels of the pia arachnoid, scattered microscopic subpial hemorrhages, congestion of the vessels of the internal capsule, pons, and medulla, and hemorrhages into their sheaths. In the second case the vessels of the cortical gray matter were dilated but empty and the perivascular spaces were dilated, chromatolysis was more or less marked, and the other changes were similar to those found in the first case except for the fact that there was also an extensive extravasation of blood into the substance of the lower surface of the orbital lobe. Two hypotheses might be offered to explain the anatomical lesions, the one suggesting that as a result of the compression of the air and gases the skull and spine are struck as if with a solid body and the vibration, transmitted through the cerebrospinal fluid, causes molecular disturbances of the nerve tissues. The other suggests that the compression produced is followed by rapid decompression with the liberation of gas bubbles and the development of embolism. It would seem probable that both forces—compression and decompression—acted to produce venous congestion and arteriocapillary anemia with their resulting secondary effects. The congestion and anemia would explain such symptoms during life and in nonfatal cases, as mania and excitement on the one hand, and headache, amnesia, vertigo, stupor, inattention, fatigue, mental confusion, and terrifying dreams, on the other.

Camphor in Oil in Pneumonia.

Camphor when added to culture media even in the proportion of 1 to 10,000 inhibits the growth of pneumococci. A series of experiments on rabbits in which an emulsion of pneumococci was injected intravenously, showed that injections of camphorated oil retarded death from two to five days in all and in 50 per cent. of the cases prevented it. Clinical experience has demonstrated that hypodermatic injections of camphor are not toxic. A prominent physician of New York city has given over four thousand injections of camphor in oil, sometimes giving as high as one hundred and fifty grains daily to one patient without any symptoms of poisoning.

Camphor hypodermatically exerts an inhibitory action on the pneumocci in the blood stream and appears to have an antitoxic effect analogous to diphtheria antitoxin.

It is recommended that a dose of 10 units be injected as soon as possible after the initial chill and repeated every eight hours except in bilateral pneumonia and in cases with severe toxemia in which injections of fifteen to twenty mils should be given every six to eight hours. When temperature, pulse and respiration become normal, injections can be made every twenty-four hours until the lungs begin to clear up.

Eli Lilly & Company supplies Ampoules No. 28 Camphor in Oil. Each ampoule contains 10 mils of solution representing 36 grains of camphor. The fine reputation for quality enjoyed by Eli Lilly & Company, known as THE Ampoule House, is assurance to the physician that in specifying Lilly Ampoules there can be no doubt of the therapeutic activity of the preparation.

Our readers are referred to Eli Lilly & Company for further information on this or other subjects pertaining to ampoule medication. It is said that this concern offers the most complete line of American-made ampoules to be found in this country.

Massacre Every Baby's Tonsils.—A Dr. Richard W. Perry of Seattle, Washington ,who unfortunately can append to his name the initials F. A. C. S., advises that every child's tonsils, without a single, solitary exception, should be cut out. No matter how normal the tonsils may be, no matter how well the child may be getting along, no matter how free from any kind of trouble it may be, he says the child should not be permitted to get older than four years without having its tonsils removed.

I am not exaggerating. His article entitled: "The Removal of Tonsils as a Prophylactic Measure in All Children of Four Years of Age: The Why and How," appears in Northwest Medicine for November, 1917. And here are the doctor's conclusions in his own words: "In conclusion, then, I wish to go on record as advising the removal of every tonsil at four years of age, irrespective of its condition, or as much younger as infection may indicate. In view of the tonsil's lack of any proven function, its ease and safety of removal and its baneful effect on the economy, I do not see how any systematic and scientific reasoning can arrive at any different conclusion."

Read it over again carefully. Every tonsil of four years of age, irrespective of its condition. Of course far be it from me to insinuate that a tonsil specialist in writing such articles has any ulterior motives in view. But think of the idea of capturing every child in the land and subjecting it to the shock and the danger of removing its tonsils, even when the tonsils are perfectly normal, showing no signs of inflammation or hypertrophy!

I am sometimes angry at quacks and irregulars because they attack our profession and accuse surgeons of operating unnecessarily, uselessly, for the money there is in it. But I must confess that an article like this which is published in a reputable medical journal without any criticism by the editor gives the quacks sufficient justification for their accusations. And I must say also that a quack within the ranks of the profesison possessed of operating zeal, no matter how skilful as an operator, acn do more harm than a thousand quacks outside of the ranks of the profession.

"Its ease and safety of removal." How glibly the doctor says it. Just as if there were on record no cases of infection or fatal accidents from removal of the tonsils! —In conclusion I will say that an article like that of Dr. Perry's is a disgrace to the medical profession and it should not have appeared in any medical journal without critical comment by the editor.—Critic and Guide.

Tonics Preferable to Stimulants.

In selecting a tonic it is highly desirable not to mistake stimulation for tonic action. Stimulation means unduly exciting the higher nerve centers, suddenly and often excessively elevating the blood pressure, and providing a quick but evanescent effect which rapidly passes away and is many times more harmful than beneficial. Tonic action means the gradual restoration of functional efficiency—"helping the body to help itself." Thus, Gray's Glycerine Tonic Comp. is a true tonic, with all the advantages and none of the drawbacks of a stimulant. To state it tersely, "Gray's" is an aid and a support to body functions—a genuine prop—not merely a spur or lash.

idence of leprosy. The individual may, however, be regarded as suspicious, and repeated examniations made. The examination of the circulating blood by the method of Smith and Rivas should receive far more attention than it has hitherto received, and is of much greater importance than examination of the nasal mucus. To insure success, the blood specimens in the Smith and Rivas procedure should be taken during the febrile paroxysm. Among 248 cases of anethetic leprosy, in which reliable finding in the only 12.9 per cent. gave positive results. It is therefore concluded that examination of the nasal mucus is of no value as a routine measure.

Spirochetes in the Urine in Trench Fever.—Nankivell and Sundell, in The London Lancet), examined ninety-nine specimens of urine from twenty-six patients with trench fever, finding spirochetes twenty-nine times in more than 300 films. They never found spirochetes in films made from normal men or from those ill with other conditions. The spirochetes were found as early as the first twenty-four hours of the disease, but most commonly the men were seen only in the relapses when spirochetes were not infrequently found. In many cases a long series of negative examinations would be followed by one in which spirochetes would be present. The spirochetes varied from one in several films to large numbers in every film. The positive findings seemed to be commonest in specimens taken about twenty-four hours after the recurrent rises in temperature. The organisms have not been found in blood films taken from the same cases and it has been impossible to transmit the disease to any of the experimental animals.

How to Administer Quinine.—MacGilchrist (Indian Medical Gazette), says that the best way to administer quinine by the mouth for the treatment of malaria is to give it thrice daily with or soon after meals at intervals of eight hours. The sulphate is the cheaper salt; the hydrochloride and bihydrochloride are expensive, and, if given in such a way that they exist in a concentrated condition in an abraded or damaged stomach, are injurious. As the senior medical officer of the brigade, he issued the following circular to his subordinate medical officers, which contains much of value to civil as well as military physicians with regard to the treatment and prophylaxis of malaria:

"There are two therapeutic agents: 1, quinine; 2, the natural protective forces of the individual. Treatment of a patient with an acute attack of fever is quinine in ten to fifteen grains thrice daily for four days at least, the quinine being continued in five grain doses morning and evening for several days thereafter. A relapse is rare in a person in good health because the natural protective forces are strong. In men in poor health, fatigue, etc., readily produces an attack. It is therefore waste of time, labor, and quinine to give quinine prophylactically to a whole regiment at a time when fresh infection is impossible, unless every individual in that regiment is in a bad state of health. In attacks of fever pick out the men in poor health, a list of whom should be kept. Treatment as indicated above and prophylaxis—quinine fifteen grains after last meal on two consecutive nights a week—should be carried out, confined to the men on this register. There is some evidence that quinine administered continuously for six months or so causes anemia and other disabilities."

The Scabies Problem on Active Service.—MacCormac and Small (British Medical Journal), point out the fact that scabies is capable of causing much invalidism among the troops, specially as a result of secondary skin lesions and infections. Treatment, to be effective, should be carried out properly and at the earliest moment. The patient should strip and rub himself all over with soft soap, massaging it in thoroughly. Then he should lie, completely covered with water, in a hot bath for fifteen minutes to soften the skin. Following this he should scrub all the affected parts of his body with a stiff brush to break the vesicles. If any remain unbroken they should be opened with a needle. Then he should anoint himself from head to foot with sulphur ointment, rubbing it in thoroughly on all affected parts. This inunction should be repeated twice daily for the first three days and on the fourth he is given a bath and all of his clothes.

Dermographism and Syphilis.—According to Perntz 24 hours after an injection of succinimiotate of mercury positive dermographism can be obtained on subjects having primary and secondary syphilis as well as latent cases. It occurs with far more constancy than the Jarisch-Herxheimer reaction.—Dermitologische Zeitschrift.

Gunshot Wounds of Peripheral Nerves.—Short (Bristol Medico-Chirurgical Journal), states that cases of nerve concussion should recover in from four to six weeks, whilst partial division of a nerve should go on to complete recovery in from two to six months.

When there is complete division of the nerve with a bulbous swelling at the end of the upper segment, succeeded by a mass of scar-tissue of variable thickness, and adherent to the surrounding tissues, the treatment adopted is to free the two ends of the nerve, cut off the upper segment through the upper end of or above the bulbous swelling, so as to expose visible nerve-bundles with no excess of interstitial fibrous tissue, and suture with catgut. Many English surgeons wrap the junction in Cargile membrane; others sometimes use a segment of saphena vena, but often nothing is used.

It frequently happens that the ends cannot be brought together because of a gap of one to two inches. This is bridged by two or three plies of internal cutaneous nerve from the upper arm, but some surgeons use catgut strands, and others employ nerve-anatsomosis.

There may be a bulbous swelling on the nerve adherent to the track of the bullet, and it may be doubtful whether the nerve fibers pass through it or are interrupted. In such a case we stimulate the nerve electrically above and below the bulb. If, in the case of a small or medium-sized nerve (not the sciatic), any muscles supplied by it contract, the scar is freed and wrapped in a segment of saphena vein. If there is no response, excise the scar and suture.

A large nerve, such as the sciatic, may show symptoms of a partial division, and at operation part of the nerve shows a scar. The best procedure is to take out a quadrilateral, including the scar, and, by splitting the nerve trunk up and down, to bring the two ends together, elaving the intact portion of the nerve undisturbed.

The nerve may be intact, but pressed, upon by a bullet or by shattered bone. The treatment is to remove the cause of pressure, but although this relieves pain at the time, it is apt to return during the process of healing, and prove very intractable.

Pay of Army Surgeons for the Civil War.—Our issue of November, 1861, quotes from a circular from the War Department, January, 1860, as follows: Assistant Surgeon, under five years' service $53.33 per month, rations $36, forage for horse $8, servant $12, clothing for servant $2.50, servant's rations $9. Total receivable $123.83. Over five years' service, $70 per month, other allowances same, total receivable $137.50. Total receivable over ten years' service, $173.50. Surgeon, under ten years' service, $80 per month, total amount for servant $47, aggregate receivable, including horse and servant, $187. Surgeon over ten years' service, $80, aggregate amount receivable $223. Allowance for forage and servants is paid only when they actually employ and keep in service the number of servants and horses charged for. In addition, both assistant and full surgeons are allowed an additional ration per day after the termination of every five years 'service. (Note: As we understand the terms, the actual receipts besides allowances for horse and servant were as follows: 1st five years, assistant surgeon, $1,072. 2nd five years without promotion, $1,704. 2nd five years with promotion to grade of surgeon, $1,824. 3rd five years, rank of surgeon, $2,256. 4th five years, rank of surgeon, $2,688. Considering the different value of the dollar in purchasing power, these salaries are not very different from the present).

In January, 1862, a bill was introduced providing for a Surgeon-General, ranking as Brigadier General, a Sanitary Inspector General ranking as Colonel, six Sanitary Inspectors ranking as Lt. Colonels, Surgeons of first class ranking as majors, 50 Surgeons of second class ranking as captains and not over 70 Assistant Surgeons ranking as 1st lieutenant, all as of cavalry. This was essentially the same a sthe system up to the present, except as to the numbers. Salaries are not mentioned but editorially, the bill is highly commended and they were therefore, apparently regarded as satisfactory.—Buffalo Medical Journal.

Microscopic Examination of Nasal Mucus in Leprosy.—Johnston (Philippine Journal of Science), after microscopical studies in several thousand cases, finds himself wholly in accord with the views of Kedrowski and Bayon to the effect that the organism causing leprosy has two stages in its life history, a nocardial or streptothrical nonacid fast form and a bacillary and acid fast form. Nothing is to be gained from the examination of nasal mucus when definite clinical signs of leprosy exist. In the absence of clinical signs, acid fast bacilli in the nasal mucus should not be regarded as prima facie ev-

Stearosan: Santal Oil in Improved Form.

After a comparatively short course of treatment with santal oil the stomach sometimes rebels, and the patient suffers from such symptoms as gastric distress, nausea, disagreeable eructations and loss of appetite. This necessitates a discontinuance of the medicant and means an annoyance to the physician and a loss to the patient. It was to obviate this—to secure the therapeutic virtue of oil of santal without its deleterious effects—that Stearosan was evolved.

Stearosan is santalyl stearate—santalol combined with stearic acid—a true chemical compound, equivalent to about 50 per cent. of santal oil. It is supplied by Parke, Davis & Co., in 10-minim elastic gelatin globules, in boxes of 25 and 100. The average dose is one globule immediately after each meal, to be increased to two or three as indicated.

Stearosan does not tend to irritate the gastric mucosa, as it is soluble only in the alkaline medium of the intestinal tract. The therapeutic indications for it are the same as those for oil of santal—notably, chronic gonorrhea, cystitis, urethritis, bronchitis, bronchorrhea, etc. Psoriasis, urticaria and other skin disorders are also amenable to the influence of Stearosan.

A complimentary package of Stearosan will be sent to any physician who wishes to test the therapeutic efficacy of the product. Requests should be addressed to Parke, Davis & Co., at their home offices and laboratories, Detroit, Mich.

The Roman Sign.

The Romans, in signifying their approval, turned their thumbs up, or their disapproval by thumbs down. Physicians signify their approval of the medicinal value of a product also by signs. For instance ℞ Hayden's Viburnum Compound ʒ i t. i. d. or as required, administered in hot water.

This is the invariable sign of those physicians who are familiar with the therapeutic efficiency of Hayden's Viburnum Compound in Dysmenorrhea and other conditions where an antispasmodic is required.

For over fifty years this product has been before the profession, which is the best sign of its approval, and this approval has only been gained through its dependable value wherever the original product is administered.

It is not a narcotic, and the New York Pharmaceutical Co., Bedford Springs, Bedford, Mass., would be glad to send you literature and samples for clinical purposes.

Watchful Waiting.

Ashton in his "Practice of Gynecology" rightfully says, "Many women recover their health and the pelvic organs assume their normal function without an operation," and he further states, "Operations during the acute stage of an infection have a high mortality and the pelvic organs are often unnecessarily sacrificed."

Except in certain cases, a waiting policy can be carried out. Local treatment, together with the giving of Hayden's Viburnum Compound, will oftentimes accomplish a better after result for the patient than an abdominal operation can do. The day for operating on every little pelvic trouble is now, we trust, happily passed.

Logical treatment demands that certain general and hygienic measures shoul dbe used, such as rest, diet, care of bowels, proper clothing and vaginal douches, etc., and with his general building up of the health there should be a toning up of the uterine muscles, and this can be accomplished by the giving of Hayden's Virburnum Compound.

The Pneumonia Convalescent.

If the convalescent from pneumonia is to secure the highest protection against complications, such as a tubercular infection grafted on to the condition from which he is just recovering, some measure to increase his general bodily resistance must be employed. For this purpose cod liver oil, as represented by Cord. Ext. Ol. Morrhuae Comp. (Hagee), is of such large utility that with many physicians it is a routine practice to put their pneumonia convalescents upon it for a considerable period following the primary infection. Cord. Ext. Ol. Morrhuae Comp. (Hagee) offers the patient the sustaining and invigorating properties of cod liver oil, but is so palatable that it may be used even in the case of those whose digestive apparatus is below par. It will do everything cod liver oil is expected to do.

Ipecac has long been favorably known to the medical profession. Its value has been recognized by many practitioners in the treatment of amebic dysentery, as an hepatic stimulant and as an intestinal antiseptic.

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"PATRIOTISM AND THE PHYSICIAN.*

By D. T. Tayloe, M. D., Washington, N. C.

Fellow members of the Tri-State Medical Society, Ladies and Gentlemen:

I am profoundly grateful for the very kind manner in which it has been seen fit to present me to this distinguished gathering. Indeed the highly pardonable pride I take in being permitted to address you as the President of this great Society, is equalled only in the genuine pleasure I feel in that the meeting is being held in the historic State of South Carolina, and in the beautiful city of Charleston. Here it is that the women, God bless them, are marked by their loveliness, the men noted for bravery and chivalrous actions, and good old time Southern hospitality reigns supreme. Indeed I apprehend that your celebrated State must have been uppermost in the mind of that brilliant orator and scholar, Henry Grady, when he said:

"It has always been the richest and fairest domain of this earth; the home of a brave and hospitable people. Here is centered all that can please or prosper mankind. A perfect climate, above a perfect soil, yields to the husbandman every product of the temperate zone. Here, by night the cotton whitens beneath the stars, and by day, the wheat looks the sunshine in its bearded sheath. In the same field, the clover steals the fragrance of the wind, and the tobacco catches the quick aroma of the rains."

In the dark days of 61 to 65, days of suffering and of sorrow, when men felt that the protection of home and fireside demanded the resumption of powers granted to the Federal Government, it was South Carolina that first withdrew from the Union, and it was South Carolina that fired the first gun in defense of State's Rights. Again, when men saw that further strife and bloodshed was futile, and that freedom and union was henceforth to be the slogan of America, it was South Carolina that first adopted this great principle, and she has stood out pre-eminent in her loyalty to that great banner of freedom, the stars and stripes, ever since. If you doubt this for a moment, I have but to point you to her tireless activity in the present great struggle, when America is again called upon to stifle autocracy, and place despotism under the strong heel of righteousness.

My friends, the trend of thought in America today is being concentrated upon the winning of the war, and "making the world safe for democracy." Every institution, every line of activity, every vocation and every profession is vieing with each other in their efforts to show a patriotism and love of country that will excel the other. And this branch of the medical profession of America, the most loyal and patriotic of all professions, stands ready and willing to do its share, either at home or abroad, towards conserving the health and manhood of the brave young men who have dared to sacrifice their lives, if need be, in defense of their country's honor. I crave your indulgence then, while I discuss with you for a few moments, the theme: "Patriotism and the Physician."

Be it said to the eternal credit of our profession, that there has never been a war, cruel as war is, that the doctor has not been the first man taken into consideration. And in this present war, we have a practical human interest as trustees of the common life and property of the world, as practical, as well as professional men, we can interpret its significance and measure our interest in its results in the practical terms of Servia, Poland, Belgium, the Lusitania, Louvain, Edith Cavell, and what these and other black pages in the records stand for.

It is because of this black record, that you and I have a deep and abiding interest in this great enterprise; we have many interests in it. Of course our first interest is that these boys and girls who have gone to the front should come back, as they will come back with victory in their hands. And we want that victory not that we may sink Lusitanias, not that we may bombard defenseless places and people, not that we may tear up treaties and call them scraps of paper, not that we may impose our imperial will upon somebody else, but that we may help to pass on to somebody else, to other peoples and other generations, the freedom and liberties which our fathers fought and died for here, and which have demonstrated their validity by making us not only the great free people of the world, but the great progressive, industrial, commercial, liberty loving people of modern civilization. And it is here that the doctor can play a large and prominent part by reason of his intimate and close association with the people, and his large influence over them.

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*President's address delivered at the meeting of the Tri-State Medical Association of the Carolinas and Virginia, at Charleston, S. C., February 20, 1918.

Our American doctors of this generation have a new role—they have satisfied the usual place of the physician, who cements the many people in their daily labor, by serving as citizen and as humble guardian of both rich and poor.

Now the way lies to a greater victory. The purpose of the soldier is to kill—no matter what his cause may be. The doctor stands by to save. His patriotic blood may rise and his fingers clench at the trigger of an imaginary weapon, with his desire to meet out punishment—but he may not, for his standard bears the sign of mercy and his weapons are the means which bring salvation.

There never was a time in our country when the call has stirred the medical profession more. Men in all grades and fields of medicine have gone or are under way. Every day more are weighing the problem of the country's call and their duty. The patriotic spirit sometimes has made men take the step without weighing all the cost—but even when the sacrifice leaves a family behind on shorter rations, the wife holds her head more proudly and the children tell the story of the father's sacrifice.

Business comes to the man with capital, even if he leaves it for a while. The doctor who goes to war will need to rebuild his practice on his return. Everywhere, those who must stay behind are already conserving the busines sof those who go so that all may not be lost.

Only the selected men may serve. By now nearly 20,000 doctors have come forward. By the first of March the 30,000 needed for the medical corps will have been filled out.

What a striking illustration of the fact that not only by its achievement in specific diseases, has the profession brought the world into its debt. Quite as much by his character has the physician pointed the way to the noblest development that human nature can attain. Not only does he diminish the horrors of war, but he does and has shared in its perils, and has shown a disregard of its dangers and a fearlessness in the performance of his duty which is worthy of all praise. During the Civil War, the loss of medical officers was proportionately larger than that of any other staff officers. The heroism of Gibbs, who perished in Cuba is known to you all. In the Navy, Dr. Jno. F. Bransford, had resigned his command as surgeon in 1890, but immediately volunteered for service in the war with Spain. During the battle of July 3, off Santiago, he dropped his scalpel and bravely took charge of a gun, fighting gallantly throughout the engagement, his services as surgeon not being called upon until the wounded prisoners were brought on board. Like the mother of Gracchi, we may proudly point to such and, say, "These are our jewels."

Moreover, there is no profession which gives so freely for the good of the human race. Where is the doctor whose ear is deaf to the cry of suffering humanity in cases of accident, or during the pangs of maternity, who will not deprive himself of well earned sleep and needed recreation, to minister to his suffering fellow creatures without ever a thought of any pecuniary benefit to himself. And so it is, whether in war or in peace, it is the privilege of the conscientious doctor to march between lines of grateful men and women and a host of God's little children who, on bended knees and with clasped hands, would reverently invoke Heaven's richest blessing upon their deliverers.

It is not given to all of us to get on the firing line, in the emergency hospital, or even in a base hospital. Some of us are too old, others are physically incapacitated, and for various and sundry reasons, a number of us must remain behind. But, thank God, we can all do our share, and I know that I speak for the rank and file of my profession when I say, that the hearts of those of us who of necessity must remain at home, throb with the same generous impulses, and the same warm blood of loyalty and patriotism courses through our veins. We too have a large and a glorious part to play in the conservation of this nation's resources, and in the winning of the war. It now becomes our duty more than ever to take care of the moral, physical, and social, resources of our beloved country, and to keep the home fires brightly burning. To minister to the needs of suffering humanity away from the trenches, and pour the true balm of Gilead into their wounded spirits. To look after and take care of the practices of our brothers who are more fortunate though none the more anxious than we, in serving at the front, to the end that their families and loved ones may be succored and sustained in their absence. To keep the courage and fighting spirit of those at home bolstered up. In short, to exert every ounce of energy and strength of which we are capable to keep the great arteries of strength and patriotism which lead from the people back home to the armies in the field open, to the end that the life blood of confidence, love and whole souled devotion may flow unrestrainingly to them.

The glory of great battles has usually gone to those who have framed the strategy and have engaged in the operative tactics. But no glory could arise but for the fitness of the ranks and file who make the way to success. This greatest war has developed anew the genius of medical science and of surgical achievement; when the history is written, the glory of medicine will shine with its own luster, and undimmed amid a galaxy of constellations.

NASAL ACCESSORY SINUSITIS.*

By E. Reid Russell, M. D., F. A. C. S., Asheville, N. C.

In the treatment of any diseased organ it is well to consider the factors of its causation and the natural processes of repair. In the first, that the cause may be removed, and in the second, that we may imitate the processes of nature in the work we may do. At some time in the history of man these accessory sinuses are thought to have had important olfactory functions. These sinuses formed a part of the nasal cavities, connected by wide openings and these gradually became walled off, leaving only small openings or channels; ventilation and drainage of these cavities lined with active mucous membrane must necessarily be open at all times. Skillern says, "If we accept that these sinuses are vestigial in character they are organs of less vitality, becoming diseased more easily and less capable of repair." The mucous membrane is found to have less glandular elements, nerve filaments and blood supply than is found in the mucous membrane of the nose. At birth the maxillary sinus is very rudimentary in form and it is not until about the fifteenth or eighteenth year that the full size is reached, the frontal is not found until about the end of the third year and it is not a distinct separate cavity until the end of the senventh. The ethmoid and sphenoid sinuses are present at birth but develop slowly and it is not until about puberty or later that they assume complete form, so we are not concerned much with sinus trouble in early childhood.

There is a wide variation of size, form, dimension and location even in the adult. The combined capacity is about equal to twice that of the nasal fossae, there are in normal conditions wide openings of communication with mucous membrane lining the walls of each. This explains how the inflammation affecting the nasal passages involves the sinuses. In the great majority of cases where the openings are near, infection passes from one to the other. In case of the frontal becoming diseased ,the nearness of the anterior ethmoid and the maxillary usually causes their infection; these make up the anterior group. In the same way the posterior ethmoid cells become diseased from a suppurating sphenoid because the openings are near each other in the region of the superior meatus. Purulent infection is also spread by capillary attraction and syphonage. A common vascular and vaso-motor supply makes for a mutual pathological dependence. So we see that we must take into consideration all these sinuses when called to treat a disease of one. In case of the maxillary a certain proportion are caused by the teeth, usually the second bicuspid and first molar, about one-third are due to the teeth. I ntreating the sinuses the situation and size of the ostia must be remembered. All these cavities are lined with mucosa having cilliated epithelium which directs the flow of secretion toward the nasal cavity. The alternating negative and positive pressure caused by the inspiration and expiration ventilates the sinuses in a normal nose. Blowing and sneezing, by causing undue positive pressure may result in forcing secretions into the sinuses. During a cold there is more than apt to be infection of one or more of these sinuses. If the drainage and ventilation are good, resolution may take place after the acute infection has expended its force. Should this not be sufficient or the infection be virulent the infection may be plolnnged or a chronic condition is established; osteitis of the bone and necrosis with polypoid degeneration may occur. The symptoms of sinus involvment are temperature, severe fullness in the head, tenderness on pressure, headaches, neuralgic pains, more or less discharge of pus on examination of the nasal passages. In the case of eye pains, it is well to investigate for the presence of sinusitis. No diagnosis of headaches is complete until the cavities are examined. Sinus involvment of the eye may be caused by infection of the ethmoid or sphenoid. Suppuration of the sinuses in a chronic case may give rise to no pain, so long as there is drainage. If the openings become closed the pain is very violent. The so-called catarrh or a chronic discharge from these sinuses is a cause of infection of the lower **respiratory** tract as well as the **intestinal canal**. Ethmoid sinusitis causes a number of obsucre headaches from a fullness at the bridge of the nose to severe pain all over the head. Again headaches from the ethmoid sinuses may be hard to diagnose because there is no visible trouble, but by excluding the other sinuses, we may put the blame on the ethmoid, if we find a polypoid condition in the nose. The mere removal of the polyps with a snare means only a recurrence later, unless this sinus trouble is cleared up. The exanthemata and influenza are often complicated by ethmoiditis; the symptoms are headaches, pain about the eyes, pain on the side of the nose near eye, mental dullness, and the discharge may be watery or pus. nIfection of the frontal, which is often combined with the thmoid, the symptoms are headache on one side, severe in the frontal region, worse in the morning, tenderness under the brow at the inner angle of the orbit. If one one side it may be very near diagnostic. In case of the maxillary the symptoms of an acute attack are fullness and pressure, the cheek may be sensitive to pressure, neuralgic pain in the eyes, and a tooth may seem too long. In the chronic disease of the antrum, there is little or no pain, the symptoms are more apt to be supra-orbital neuralgia, and the neuralgia may at times affect the whole isde of the head. The opening being near the top, during sleep a lot of pus may run out. The sphenoid sinus is so obscure we may overlook trouble here. These are two irregular shaped sinuses in the posterior part of the nose at the top, seldom visible. Its a very thin bone that separates these from the pituitary body, cavcernous sinus and the third, fourth and sixth and vidian nerve. A sinus full of pus may very easily affect these nerves; if a small abscess at the root of a tooth may be the cause of serious systemic infection and complete relief is followed by drainage, it is not hard to realize what a place we have for focal infection in these sinuses. In regard to treatment search out these foci, remove and drain them. In many acute cases, cleaning the nose with a normal saline and with care to cocainize only the openings and gently probe will suffice to relieve most cases. Most of the work can be done intra-nasally under local anesthesia. Dentists often employ the old method of drainage and irrigation through a tooth socket. It is right to remove a diseased tooth, but surgical judgment calls for better ventilation and drainage into the nose. The ordinary suction apparatus is very effective, the most satisfactory that I have used is the one devised by Dr. Coffin of New York. The extensive mutilating operations have had their day and every one practices the more conservative drainage and ventilation. Very many of these cases of sinusitis are due to enlarged **middle turbinates** or a **deviated septum** and septal spurs. These encroach upon the sinus appertures and ever so little additional swelling causes their closure, hence this must be corrected before a cure can be expected.

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*Read at the meeting of the Tri-State Medical Association of the Carolinas and Virginia, Charleston, S. C., February 21, 1918.

SYSTEMIC INFECTION THROUGH THE TONSILS.*

By George F. Doyle, M. D., Winchester, Ky.

It has been generally recognized for a long time that certain forms of infectious disease follow closely upon affections of the tonsils, and our increasing experience proves beyond all doubt that a considerable number of infections take place through the tonsil. Of these perhaps the most important is acute articular rheumatism, but it is a well known fact that many other diseases, which depend upon micro-organisms for their existence, begin in the body after the infective bacteria have entered through the tonsils.

The list of diseases which follow the various forms of tonsillar disease has now become quite formidable, and we should not fail to place the great importance upon these tonsillar affections which their existence demands, but should regard every diseased or enlarged tonsil as a constant menace to the health of its possessor.

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*Read before the Kentucky Valley Medical Association, Richmond, Ky., June 30, 1916.

Systematic infection may occur through the tonsil either by way of the lymph stream or by the blood stream. Infective agents having been absorbed by the tonsils, readily find a further pathway of access to the general system through the lymphatics. The efferent lymphatics of the tonsil empty into the superficial and deep chain of cervical glands and thence into the jugular trunk which, with the lymph from the subclavian, empties more or less directly into the vena cava. As the afferent branches come from the nose and tongue, the tonsils may also become portals of indirect infection having its origin at those points.

Many instances of an undoubted direct passage of the bacteria from the tonsil into the blood stream, producing severe and often fatal septicemia, have been reported.

The diseases which gain access to the body by absorption through the tonsils may be divided into two general types; first, those local infections which produce constitutional disturbance by the absorption of toxins, of which diphtheria is the best example, and, second, by invasion of the body by bacteria, the most common of which are tuberculosis and the various forms of septicemia caused by the pyogenic organisms. Rheumatism, I believe, should also be classed under the latter type.

The absorptive powers of the tonsils have been firmly established by careful experimentation, and the studies of Goodale, Kayser, Wood, Hendelsohn, Pirera and others, have proven that fluids and minute particles of foreign matter, such as dust, carmin and other pigments when applied locally, are rapidly absorbed by the tonsils both from the surface and from the crypts, and are found in the histological sections of the tonsils as early as ten minutes after their application. It has further been proven beyond a doubt that pathogenic bacteria can be and are absorbed through the tonsillar epithelium.

The fact that bacteria can pass through the normal epithelium of lymphatic glands was demonstrated by Ribbert and Rizozzero as early as 1885, and by Ruffer in 1890. According to Digby in normal animals large numbers of bacteria can be constantly found in the lymph structures of the appendix, Peyer's patches and in the tonsils. Most of the bacteria are intracellular. Solitary bacteria and cells loaded with bacteria can also be seen in their passage through the epithelium. Wood claims to have seen bacteria passing through the epithelium after it has been destroyed by the toxic action of bacteria in the crypts, but he has been unable to demonstrate the presence of bacteria in the parenchyma of the tonsil, when examining organs that were supposed to be normal. They exist, however, in large numbers in the cavities of the tonsillar crypts. Certain forms of pathogenic bacteria, such as the tubercle bacillus and the bacillus of anthrax, have been demonstrated actually passing through the normal epithelium. It is probable that the subepithelial adenoid tissue of the tonsils is of importance in the production of immunity, but it is doubtful whether the tonsillar tissues ever carry out this function to a sufficiently large extent to make their retention an essential factor to the well-being of the patient.

From a personal study of this subject, extending over a number of years, I am convinced that it is also possible for infection to occur by way of the tonsils without the infective micro-organisms entering the parenchyma of the organ. I have frequently demonstrated in enucleated tonsils large crypts extending directly down to the thin tonsillar capsule, with an entire absence of any intervening lymphoid tissue. This is brought about by the long continued infection within the crypt, which not only destroys the mucous membrane, but also the lymphoid structure at the bottom of the crypt. As a result of this there exists a wide open portal for infection, leading directly into the lymphatic system, and the infecting micro-organisms within the crypt readily gain access to the body without the necessity of passing through the parenchyma of the tonsil. This would seem to explain those cases of rapid and overwhelming infection of the general system from the tonsils.

When we regard the tonsil as an exposed lymph gland, with its crypts constantly filled with pathogenic bacteria and decomposing material, it is indeed remarkable that there is not a constant infection taking place, and that every case of tonsillitis does not produce severe systemic infection. It is evident that there must be a very powerful defensive mechanism, but just what that mechanism is has not been definitely determined.

Notwithstanding that much has been

said of the tonsils as part of the system of the body's defense against bacterial invasion, the fact still remains that this defensive function is easily overcome, especially during childhood, and once seriously interfered with, it frequently does not regain its normal condition. Thenceforth it may be a positive menace to the body through its ready susceptibility to infection, or by the ease with which bacteria pass through its covering into the lymphatic channels beyond, without marked reaction upon the part of that organ.

While it is generally believed that the enlarged tonsils form the more active source of infection, and this seems to be substantiated to some extent by the statement of Wood, in which he claims that evidence tends to show that the larger the lymphatic mass and the deeper the crypts the more readily do the pathogenic organisms pass through the tonsillar tissues to the tonsillar efferents, yet it has been my personal experience that the small, submerged tonsil is just as dangerous, if not more so, than the enlarged one. This has also been pointed out by Wright, who claims that clinical facts seem to show that it is likely that the small, sunken, ragged tonsil and not the large tonsil lets through the dangerous germ. The contributions of Goodale to this subject also seem to indicate that bacterial products are absorbed by the small or nearly atrophied tonsils, as well as the enlarged ones.

The part played by the faucial tonsils in acute articular rheumatism and in acute endocarditis merits a wider appreciation. The fact that an intimate connection exists between the tonsils and acute rheumatism is shown by the freqeuncy with which tonsillitis precedes or accompanies an attack of this disease. I believe there is a great deal to be said in favor of the view that tonsillitis is a primary infectious disease of the lacunae, and that rheumatic fever is a secondary infection arising from the absorption of bacteria into the general system.

This view is strengthened by the investigations of Poynton and Paine, who have shown that the diplococci in the tonsils in rheumatic tonsillitis were identical with those isolated from the blood in rheumatic fever, and when injected into rabbits they produced arthritis and endocarditis.

The importance of this question has been still more accentuated by the extensive researches of Fritz Mayer, conducted in the laboratory of Professor von Leyden, and published in 1901. Mayer, after an investigation extending over two years, succeeded in repeatedly isolating from the throat in rheumatic patients a diplococcus easily decolored by Gram's method. This grew well on blood-agar in staphylococcal masses and in liquid media of high alkalescence in streptococcal chains, and produced in rabbits the same phenomena as did the diplococcus isolated by Poynton and Paine.

Gurich and Schichold found suppuration in the tonsils almost a constant accompaniment of rheumatic affections. Gurich not only found the pus, but by tonsillectomy claims to have succeeded in curing 98 out of 125 patients with articular rheumatism; the outcome is not known in 15 of the other cases. Schichold's experience has been equally decisive in a series of 70 cases; the pus was accumulated in actually measurable amounts in a number of individuals. An important point in these experiences is that in nearly every case the patients had never been aware of the tonsillitis and the discovery of pus was a surprise. The tonsils were apparently normal on casual inspection; not until the anterior pillars of the fauces were drawn aside was anything abnormal discovered, but then the pus exuded on the slightest pressure. The rapid and permanent subsidence of the pains following tonsillectomy confirms the etiologic connection between the follicular tonsillitis and the rheumatism. Schichold advises prompt tonsillectomy at the first attack of acute articular rheumatism. He has observed a number of instances in which an apparently mild attack was followed by the graver forms of cardiac disease. The germs responsible for many cases of articular rheumatism nest in the tonsil pus and pass thence into the blood.

It has been pointed out by a number of observers that in a large percentage of their cases of acute articular rheumatism there was no history of the patient having had an attack of acute tonsillitis. It should be remembered, however, that it is not necessary for the patient to have an attack of acute tonsillitis before the rheumatic infection may enter through the tonsils, as it has been demonstrated that under favorable circumstances even quite virulent micro-organisms can pass through the tonsils without any reactionary or inflammatory changes in the tonsillar tissue itself. I have seen a large number of cases in which there was undoubted systemic infection occurring through the tonsils in which the patient had never suffered from the usual form of acute follicular tonsillitis. The thin layer of epithelium in the interior of the crypts is most easily and frequently destroyed and this affords a ready passage for the infective bacteria into the lymph channels. I believe that a very slight tonsillar irritation is the precursor of more or less severe rheumatic or septic systemic infection more frequently than is generally recognized. The usual signs of acute tonsillitis are absent and insepction of the tonsils may merely show slight hyperemia around some of the crypts. The clinical importance of this form of tonsillitis cannot be overestimated, as it is frequently the starting point of severe and even fatal systemic infections.

The importance of this subject has a renewed and increasing interest when we consider the large number of endocardial lesions occurring in children which are directly traceable to tonsillar infection. Babcock states that he looks for evidences of tonsillar infection in all cases of endocarditis in children and is satisfied that he finds it in the majority of instances.

Chorea is now more generally regarded as an acute infectious disease, and clinical evidence would indicate that the source of infection is ordinarily in the tonsils. Recent investigations seem to confirm the belief that there is an intimate connection between acute articular rheumatism, endocarditis and chorea and it is probable that all of these diseases are due to one and the same infecting agent.

The fact that an intimate relationship exists between the tonsils and tuberculosis has long been recognized, and the evidence that the tonsils are frequently the portal of entry for the tubercle bacillus appears to be quite conclusive.

It is well recognized that the faucial tonsils are the infecting foci in tuberculous glands of the neck, and Grober claims that seventy-five per cent. of these cases not operated upon develop pulmonary lesions. He believes that infection through the tonsil is the most frequent origin of apical tuberculosis. His experiments have demonstrated that from the cervical glands there is a direct route to the pleurae and lungs, and that this leads especially to that portion of the lung most frequently the primary seat of tuberculosis, namely, the apex. It should be borne in mind that the tubercle bacilli may lodge and remain indefinitely in the crypts of the tonsils ready to be absorbed at any time, and are a constant source of danger, even though not involving the tonsil in active tuberculous disease.

The frequency with which tuberculous lesions are found in the tonsils varies according to different observers. In a series of 1,671 instances collected by Wood, 5.2 per cent. were found to be tuberculous. These examinations were made by various methods and the results are probably not entirely accurate. Lartigau and Goodale have shown that histologic examinations alone are incomplete, and that systematic inoculation of animals gives a much higher percentage of tuberculous lesions. In 75 cases Lartigau found 16 per cent. to be tuberculous. Dieulafoy, by the inoculation of guinea-pigs, found tuberculosis of the tonsils in 15 of 96 cases. This work has been criticized on the ground that no histologic examinations were made, as Dieulafoy was not careful to exclude the crypts, which may lodge tubercle bacilli. Latham, however, who avoided these sources of error, in 25 consecutive necropsies on children from 3 months to 13 years of age, found seven which were tuberculous, results which are almost identical with those of Dieulafoy. The susceptibility of the tonsils to tuberculous infection has also been shown by the examination of persons dead of tuberculosis.

Experimentally the tonsils are readily infected by the direct application, as well as by feeding, tuberculous material. In a series of experiments carried out by Ravenel, swine fed with tubercle bacilli from man and from cattle developed generalized tuberculosis, with marked involvement of the tonsils, apparently primary, with necrosis and ulceration. Wood has also carried out a most instructive series of experiments on swine. He found that the application of tubercle bacilli to the back of the mouth rapidly produced primary tuberculosis of the tonsils, soon followed by involvement of the submaxillary and cervical glands and extensive disease of the lungs. The mesenteric and bronchial glands were always diseased in about an equal degree. Practically all experimental observers have noted this susceptibility of the tonsils to tuberculosis.

The connection between acute follicular tonsillitis and nephritis has been frequently noted. Albuminuria is present much oftener in tonsillitis than is generally believed, because of the fact that the urine is not regularly examined. Adler says that 75 per cent. of all cases of tonsillitis are accompanied by a mild type of nephritis, which occasionally becomes chronic. The urinary findings in a large series of cases of acute follicular tonsillitis treated at my clinic at the Charity Hospital in Philadelphia showed the presence of albuminuria in 50 per cent. It was further noted that those in which albuminuria was present were always more prolonged in their course, and in some instances the albumin and casts persisted for weeks and months after the tonsillitis had cleared up. The albuminuria is not dependent upon the fever, as it occurs when there is no fever present, and when there is fever, the albuminuria often continues for some time after the fever has subsided. It is probably due to the action of toxins generated by bacteria within the tonsils. In view of the fact that tonsillitis is such a frequent forerunner of nephritis we should make it the rule to examine the urine during the course of every case.

Since Kelynack in 1893 first directed attention to the relation of tonsillar infection to appendicitis, many German investigators have devoted much attention to this subject, and a great many observations have been recorded. There seems to be some foundation for the belief that tonsillar infection may be a primary factor in the production of appendicitis.

From an anatomical standpoint the position of the appendix favors liability to infection, and its histologic structure, richness in adenoid tissue and confined situation, all render the appendix especially predisposed to disturbances arising from infection with pathogenic bacteria.

In regard to the question as to how two diseases so remotely situated may have any connection so far as cause and effect are concerned, it may be mentioned on the one hand that the lymph and blood streams may form a route for bacterial invasion, while on the other, a direct communication may be effected through the alimentary canal.

Kretz believes that appendicitis should be added to the list of diseases having their origin through the tonsils, claiming that a bacteremia was produced, and subsequently phlegmonous appendicitis, in a number of cases observed. He found in examining many cases of appendicitis that more than fifty per cent. of the patients had previously suffered from tonsillitis.

The investigations of Poynton and Paine, in which they isolated a diplococcus from the tonsil and appendix which appeared morphologically and in cultural characters identical, are interesting. The diplococcus from the tonsil produced arthritis when injected into rabbits, and was again recovered in pure culture from the arthritic exudations. It also produced malignant endocarditis with infarctions in the spleen and kidney. Cultures from the appendix when injected into rabbits produced arthritis and appendicitis. This investigation would seem to show beyond a reasonable doubt that the diplococcus in the tonsil and in the sanious fluid from the appendix were identical in nature and the cause of the lesions in the human throat and appendix and also of those in the appendix and joints of rabbits. It seems to prove almost conclusively that a cause of appendicitis may be a streptococcal invasion through the blood stream from follicular tonsillitis.

When we come to consider the relationship existing between the tonsils and the thyroid gland, we enter upon a most interesting and scientific field of research, namely, the inter-relation of the tonsils and the ductless gland system in general. From my personal observations, I am convinced that there is an important connection between tonsillar infection and disturbances in the thyroid gland. The frequency with which acute thyroiditis occurs in association with or subsequent to tonsillar infection is well known, and it has also been shown that affections of the tonsils often play an important part in the pathogenesis of simple and exophthalmic goitre. In a certain class of cases, there is fairly good evidence that the abnormal thyroid physiology is brought about primarily by the disturbance of an infectious disease, particularly tonsillitis.

Theisen has reported a series of seven cases of acute thyroiditis, six of which followed an attack of tonsillitis. Two of these cases subsequently developed diffuse goitres, and two others had attacks of hyperthyroidism frequently following acute tonsillitis.

According to Roman, there is a form of enlargement of the thyroid gland resembling simple goitre histologically in which the cellular proliferation is more of a type of inflammatory infiltration. The enlargement is symmetrical. The basis upon which the tonsils may be accused of being an etiological factor in this form of enlargement, which may be induced by direct infection, is the pharyngolingual origin of the embryonic thyroid from the fore-gut ventrally in the median line to the bronchial arches and the persistence of the ductus thyroglossus or the foramen caecum. The infection from the tonsil and peritonsillar region can be carried to the thyroid either by the blood stream or the lymphatics.

It has been my privilege to study the tonsils in a large number of goitre cases, and the tonsils were found to be diseased in a great many of them. It was further noted that there was frequently marked improvement and often permanent subsidence of the thyroid enlargement following tonsillectomy, especially in the cases of simple and incipient exophthalmic goitre.

As yet we know little regarding the part played by the tonsils in the acute exanthemata, but in my opinion, the acute inflammation of the tonsils, which so commonly precedes or accompanies many of the acute infectious diseases, is simply a local reaction brought about by the infecting microorganisms invading the general system through the tonsils.

Many other diseases have been found to occur as a result of infection through the tonsils, among which may be mentioned myocarditis, and pericarditis, bronchitis, pleurisy and pneumonia; meningitis; phlebitis; tenosynovitis; osteomyelitis; peritonitis; pyemia and septicemia; parotitis; Hodgkin's disease; various skin lesions, and iritis.

In all of these conditions in which the tonsils are the source of infection, cure is often found to follow tonsillectomy, and, therefore, we should make a careful study of these organs, having in mind the many permanent conditions which follow a diseased state of the tonsils and by prompt enucleation prevent the inroads of these many serious disorders.

While I do not advocate the indiscriminate removal of the tonsils, whether they be diseased or healthy, yet I do believe that every diseased and enlarged tonsil is a constant menace to the health of its possessor and should be removed beofre serious complications arise. When once the microorganism have entered the general system they become localized in the tissues, so that every effort should be made to arrest the process in the tonsils before it generalizes.

The presence of unusual enlargement, as well as the submerged and degenerate types; the recurrence of inflammatory affections, or any evidence of a diseased state of the tonsils, which is prejudicial to the health of the patient, should make it imperative upon the part of the physician to advise enucleation.

Furthermore, whenever surgical interference is demanded for the relief of enlarged or diseased tonsils the only operation to be considered is complete extracapsular enucleation.

During the past eight years I have practiced finger enucleation exclusively, with most satisfactory results. The operation is rapid, attended by a minimum of hemorrhage and the degree of traumatism to the surrounding structures is very slight. The technic is as follows:

Ether anesthesia is employed. The patient is placed in the dorsal posture, without pillow, the head turned slightly to the right. The mouth-gag is introduced and the tongue depressor inserted. The tonsil is grasped in the center by means of the tonsil forceps and traction made in the direction of the median line, which outlines the entire tonsil and makes the anterior pillar and plica triangularis tense. The tongue depressor is now transferred to the assistant, who holds the tongue well depressed and toward the opposite side, away from the field of operation. The point of the Allis dissector is introduced beneath the mucous membrane of the plica triangularis at its lowest point, and this membrane is separated from below upward, slightly internal to and parallel with the margin of the anterior pillar. The separation of the plica is the most important part of the operation, as upon this step depends the ease and success with which the succeeding maneuvers can be carried out. Care must be exercised in the separation of the plica so as not to penetrate the capsular structure beneath the mucous membrane. The capsule of the tonsil must remain intact, as otherwise the separation will be intracapsular and the tonsillar tissue will pull apart from the traction made upon it, and it will be very difficult to accomplish an extracapsular enucleation. The index finger is now introduced between the posterior surface of the anterior pillar and the capsule of the tonsil and carried upward and backward around the velar lobe, and continued downward and forward between the capsule and the anterior surface of the posterior pillar, thus entirely separating the tonsil with its capsule, with the exception of the pedicle by which it remains attached at the lower pole. The finger-nail is not used as a cutting instrument. The tonsil can now be lifted completely out of the tonsillar fossa. The snare is applied by passing the wire loop over the forceps and round the pedicle and then gradually tightened until the tonsil is removed, after which the tonsillar fossa is inspected for hemorrhage. If the finger dissection has been properly carried out, there is absolutely no danger of including the pillars or the uvula in the wire loop of the snare, as the tonsil can be drawn well away from these structures. The patient is returned to bed, placed on the right side with a pillow under the shoulder, so that should there be any post-operative hemorrhage it will be detected immediately, as the blood will drain from the mouth. The nose and throat receive no after-treatment whatever. The patient is permitted to leave the hospital the day following the operation, provided the temperature, pulse and respiration are normal.

RELATION OF INTERNAL SECRETIONS AND FAULTY METABOLISM TO MENTAL PERVERSIONS.*

By Bittle C. Keister, A. M., M. D., Roanoke, Va.

We are today facing many and divers theories on the subject of internal secretions, their effect on metabolism and their relation to mental perversion. We are all more or less familiar with the caprice and peculiar freaks played by the ductless glands. Take if you please, the thyroid, the thymus, the pituitary, the pineal, etc., whose physiological functions and pathogenesis are exciting the liveliest interest throughout the realm of the scientific world. Our foremost scientists are today puzzling their brains over these apparently insignificant organs.

The most definite clue to the results of internal secretions has been obtained with the thyroids. Recent experimental work on this gland makes it necessary to distinguish between the thyroid and the parathyroid tissue. The thyroids proper consist of two oval bodies located on the sides of the trachea at its junction with the larynx. They have no ducts, and are composed of vesicles of various sizes, which are lined by a single layer of cuboidal epithelium, and contain in their interior a material known as colloid. This material is formed within the lining epithelial cells, and when the visicles rupture it is discharged into the surrounding lympatics. This colloid material has given rise to much speculative thought, and will be referred to later on in this paper.

We have what is known as a set of accessory thyroids located along the trachea close to the thyroid, and having a similar structure to that of the thyroid, no doubt but their functions are somewhat similar.

The parathyroids are quite different in structure, being composed of solid masses of epithelial cells which are not arranged in vesicles, and contain no colloid material. It has been demonstrated that when the parathyroids alone are removed the animal dies quickly with acute symptoms, muscular convulsions, tetany, etc.; while if the thyroids alone are removed the animal may survive for a long period, but develops a condition of malnutrition, a slowly increasing cachexia, which may later assume a condition resembling myxedema in man. (Hewlett).

We find after a cursory study of these glands, that any form of traumatism or disease which might cause hypofunction or stagnation of their secretion, quite an array of peculiar symptoms arise. The mental forces become weakened and inactive, the skin becomes thick and immobile, owing to a collection of a mucine-like material in the corium, the connective tissue fibrils thicken, and the hair falls out. Weakness of the muscles and disturbance of the sensation are associated with a general loss of intelligence.

While these and many other pathological symptoms and conditions are the result of any serious impairment of the thyroids causing a loss of function, we have on the other hand from hyperfunction of the thyroid such a condition as exopthalmic goiter (Basedow's Disease), with all of the horrible symptoms and suffering that usually accompany that disease, such as tachycardia, syncope, asphyxia and asthmatic breathing from excessive pressure, etc.

In discussing the subject of internal secretions we do not confine our argument simply to the ductless glands, but include the pancreas, ovaries and other internal secreting glands.

The thymus gland, about which there has been much speculation of late years, belongs to the ductless class, and its physiological function is yet quite obscure. Formerly this gland was supposed to reach its full development at birth, and subsequently to atrophy, being replaced by a growth of lymphoid tissue,

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*Read before the Virginia State Medical Society, at Roanoke, Va., November 2, 1917.

t of late this belief has been abandon-
and many observers have learned that
ontinues to grow, and that true thy-
s tissue may persist through life. Its
ximity to the thyroids and parathy-
ds, and its similarity in origin would
icate like them, that it might have
ne important specific influence upon
tabolism.

here seems to be some reciprocal re-
on between this gland and the repro-
tive glands. We find that when this
nd is removed it hastens the develop-
nt of the testes, and when the testees
removed the thymus becomes slightly
arged for a time prior to a retarded
phy. (Henderson). There is no
bt in my mind but this same theory
ds good in females under similar con-
ons. And if we will read between the
s and take the time to consider, we
y be able to account for much of the
uliar phenomena that follow the spay-
of our women by "unbaked" gynecol-
sts.

t is a well known fact among writers
the subject of internal secretions that
ovaries play an important part in the
rition of both body and mind. In
ecological practice it is often observed
t complete removal of the ovaries with
premature menapause that ensues, we
e many distressing symptoms to fol-
, both mental and physical. There
cases whose mental condition be-
es so serious that they are fit subjects
an insane asylum.

was the writer's unfortunate privi-
some years ago to attend a number
his class of mutilated patients who
undergone complete ovariotomy. All
or to our modern gynecologists for
r conservatism in the matter of not
oving in **toto** these important glands
n our young and middle aged adult
ales.

ne of the class of these patients above
rred to, attended by the writer was
ung refined, highly cultured lady of
nty-six, who had been for some time
ious quite nervous, bordering on hys-
a. Acting on the advice of her rela-
s, she went to her woung uncle's san-
um in a distant city for treatment,
was operated on for **supposed** cystic
ies and hystero-epilepsy. After a
months interval following the opera-
she began to run down both physic-
and mentally. At regular monthly
vals she had attacks of hallucination
yclic insanity preceded by a state of
oseness. At other times her mind
would appear almost normal, but lasting only a short while, when she would gradually revert to the abnormal. This patient was under my observation at intervals for several months. She seemed to find temporary relief in coming to my office to take electricity and vibratory massage at irregular intervals administered by a trained nurse under my careful supervision. If I had been accessible to some reliable manufacturer of ovarian extract I should have administered a thorough course of it aided by other constructive treatment.

To keep this young lady out of the lunatic asylum and save her family from the remorse, I sent her to a specialist's sanatorium for the treatment of nervous diseases where she remained only a few weeks prior to being sent back home to die. Being absent from the city when she returned, I failed to see her, but was informed that her physician diagnosed her last illness as cerebrospinal meningitis. This, in my judgment, was the closing scene of a typical case of **abnormal internal secretions**, complicated by auto intoxication, superinduced by the complete extirpation of both ovaries of this young woman.

In older literature it was affirmed that not only the entire nature of woman, but her character as well, depended on the reproductive organs. Heimont said: "Prompter solum uterum mulier est quod est. Chereau said: "Propter ovarium solum mulier est, quad est."

Virchow's statement that a woman is a woman simply because of her generative glands, is familiar to us all. Professor Hochwart, in the American Journal of the Medical Sciences, August number, deliberately states that, "The peculiarities of woman both, in body and mind, in fact, all the femininity which we admire in the true woman, are dependent on the ovary."

Every up-to-date physician and neurologist who has had ten years experience is quite familiar with these cases of psyconeurosis among our women of the past decade, who have had the hospital craze to be operated upon for the prevention of child-bearing.

The function and sacred mission of these important organs are being studied with more care and zeal during the past half decade, and instead of the **radical** a more humane operation is being advised by our leading gynecologists, giving more consideration for after results.

These psycoses are well known to the

careful observer from early puberty to the menapause in a very large percentage of women who may be apparently healthy in all other respects.

Recent investigations have shown that the menstrual life of women is not a suddenly appearing or disappearing event. On the contrary, the phenomena seem to be a continuous wave-like condition which is not found before the beginning nor after the close of menstruation either in early youth or old age. Much of the variability of mood and disposition may be explained in this, the often inexplainable vacillating temperament in the sexually mature woman.

The question of the not infrequent insanity during menstruation has been likewise discussed. Suicides have been quite frequent at these times. A. Pilcz found intra menstrual changes of the sexual organs in more than one-third of female suicides.

Among fifty-six shoplifters, Legrand due Soulle found that thirty-five were "unwell" at the time of the crime. Icord who has written quite extensively on the subject of internal secretions observes that in perusing the diary of a young girl it does not require much perspicasity to discover the pages which were written during menstruation.

We observe these psychic disturbances at the "climacterium," which is considered the most dangerous and critical age of woman. At the time when menstruation begins to be irregular, sometimes even months or a year before, women fall into a strange state of unrest, sometimes accompanied by sexual over-excitability. Deep depressions, a tendency to outbreaks of weeping, periods of irritability, psycic vacillations and a decrease of intelligence, evil forebodings, etc. These are some of the well known conditions in a large percentage of women during this critical time.

In some cases it reaches a very high degree of psycosis, as is shown in the following case that came under the writer's observation: A lady of 46 years, whose family history was negative so far as I could ascertain. Her peculiarities in temperament and disposition were such that her family life was anything but pleasant, her husband, who was a railroad man was living apart from her, her two married sons could not tolerate living under the same roof with her, hence we can only surmise the kind of life she was living. After the first day or so of her entrance to my private sanatorium I made several very thorough examinations and foun quite an array of abnormal condition both physical and mental. Among th physical my attention was first drawn t her enlarged thyroids and slightly protruded eyeballs (exopthalmos), fast an nervous heart sounds, marked tendernes over both ovaries with slight proteuberance and tympanites; speculum examination showed a double laceration of cervix an endometritis with catarrhal discharge clitories **double the normal size**; urinar analysis revealed albumen and casts wit s. g. i. 1.010 (24 hour. spec.) The menta symptoms at this and subsequent examinations were: Hysteria, melancholia, insomnia, psychic blindness, syncope, nymphomania, etc., etc. My diagnosis an treatment at the time (several years ago were both purely symptomatic, but today I would diagnose this case as one o simple "abnormal internal secretion complicated with nephritis and lacerate cervix.' First week's treatment consiste of absolute quiet in bed under **specia** trained nurse and nervines with specia diet; second week operation for lacerate cervix and curettement of uterus unde local and H. M. C. anesthesia; latter par of third, fourth and fifth weeks administered the Dry-Hot-Air treatmen (Sprague method) with massage, and strict select cereal and milk diet. At th end of the seventh week the patient wa dismissed as partially cured. My last account of this patient was that she was doing light housekeeping and other ordinary household duties, and had made reconciliation with her husband and former friends.

This is only one of many similar case that the general practitioner meets an puzzles his brain over, and then wonder why we know so little when there is s much yet to learn.

Would that our physiologists and anatomists, our chemists and co-laborator workers would delve a little deeper int their respective sciences and bring t surface the respective functions and anatomical relation of these ductless and other internal secreting glands, with thei special bearing on metabolism, and mental forces.

We have the pancreas and its allied coworker, the liver with their peculiar generating and secreting forces producin pathological conditions such as glycosuri or diabetes mellitus, a disease abou which, until within the past decade or so we knew but little. And even at this lat day we are guessing between abnorma nternal secretions and faulty metabolism vith their respective relation to the isands of Langerhans, as the real etiology f this well known disease. The fell ymptom of acidosis in the production of iabetic coma in this disease points very onclusively to the fact that faulty metaolism plays a very important role in this isease.

We have conditions very similar to hese in certain diseases of the kidney vhen the functions of that organ become mpaired to such an extent as to cause raemia with its long train of mental and hysical symptoms. When we consider he vast array of psychic symptoms and henomena produced by faulty metabolsm and deranged internal secretions we ecome somewhat bewildered in differeniating these conditions from some of the rdinary forms of insanity. No doubt but nany a poor devil has been sent to a lunaic asylum on account of some sudden utbreak of anger or other eratic act due o hypofunction of some one or more of he ductless glands, or possibly to derangd body metabolism.

Since we have discovered that there is irect communication between the symathetic nervous system and the ductless lands, we can the more readily undertand why these organs with their secreions become influenced by mental emoion either of anger or distress. Many ases of melancholy, hypochondriasis, tc., may be caused by derangement of he internal secretions. We may also ave mental perversions, a lack of control f the passions of onanism and anger. Our aranoiacs with their cunning schemes, ur alcoholic and drug fiends, our excenric, so called religious fanatics who are uddenly and without preparedness calld by a Higher Power to preach some trange emotional doctrine, dogma or ult. These are only a few of the pathoogical effects of deranged internal secreions on mental depravity. (Relates the Harry K. Thaw case).

We have the various kinds of faulty etabolism that give rise to the purin odies such as uric acid, xanthin, guanin, tc., etc. We also have the toxins that re set free, and invade the entire sysem when these ductless and other interal secreting glands become impaired, ausing every imaginable form of mental erversion such as illusions, hallucinaions, etc. (Relates the Rev. Kelly case).

The cardinal feature of the pathogensis of various forms of insanity is involvd in this connection, since the foregoing data and illustrations clearly indicate that hypothymia and hypothyroidism may, by inhibiting the efficiency of the defensive functions of the ductless glands in general, entail a pathological toxemia capable of evoking mental disorders. Hypofunction of any of the ductless glands may give rise to toxemia by simply depriving the system of this regulating or harmonizing fluid whose function is to destroy the toxins. This is especially true of the parithyroids, since we know that tetany is nothing short of a form of toxemia caused by hypofunction of these glands.

Then as a result of the deficiency of the nucleins, the catabolic phase of metabolism is also impaired, and toxic wastes accumulating in the blood, including that which circulates in the brain cells, catatonic phenomina are invited. Chemical changes in the cortical cells of a degenerative type may ensue, causing auto-intoxication. After a study of the fundus of the eye in 109 consecutive cases of this character, H. I. Tyson and L. Pierce Clark deliberately state that the visual syndrone, as observed by them, was "a distinct" contribution to the theory that dementia precox is an autoxic disease, and that the poison is primarily vascular, which finally induces neuronic degeneration.

Concerning the genesis of the poison, these authors, with many others, conclude that the syndrone points conclusively to the fact, that this toxin is generated in the gastro-intestinal tract.

To antagonize the intoxication by any wrong method of treatment, the ductless glands which take part in the defensive functions of the body, the thyroids, the para-thyroids and the adrenals become abnormally active in some instances, and incidentally excite the distrophic brain cells, provoking the catatonic form of the disease. (Sajous).

Dercum and Ellis, in a post mortem study of eight patients suffering from dementia precox, all of whom had succumbed to tuberculosis, found that in seven the thyroid was under weight. The other seven organs showed colloid abnormalities, both quantitatively and qualitatively, and four showed retrograde changes in the acinal epithelial cells. The adrenals, on the other hand, showed a marked excess in weight.

It is a well known fact that 65 per cent. of all idiots, before the age of six years, are deprived of the thymus gland. (Sajous). It is also a fact that this class is more susceptible to infectious diseases, and about the same percentage succumb to these infections. Many die of tuberculosis in the incipient stage. As previously intimated, when we have a suppression or stagnation of the secretions of any one or all of the ductless glands, we may have a state of degeneracy of both mind and body. We may have amentia, ranging from the slight backwardness of the moron or imbecile to profound idiocy, including amaurotic, moral and microcephalic forms. Hebephrenic phenomena of melancholic type incident upon puberty is quite noticeable among school girls who rarely pass the intermediate grade of the public high school.

It is not within the scope of this paper to discuss fully the hyper-function of the glands of internal secretion. When however, in the presence of toxemia, we have clear evidence of overactivity of these organs, it is reasonable to conclude that we are dealing with a defensive reaction. If, after a trial of the dessicated thyroids and iodothyrin, we observe an increase of the motor symptoms of catatonia and those peculiar to Graves' disease, such as rapid pulse, muscular tremors, hyperhidrosis, the overactive eye reflexes, the increased muscular excitability, the dermographia symptom, the loss of weight and skin pigmentation, we may reasonably conclude our diagnosis. The only clear indication in our judgment, is a partial thyroidectomy, which has proven quite successful of late. Dr. Fallis of (..), treated by this method eight successive cases of "catatonia" that recovered their mental integrity. This treatment applies more particularly to the young rather than the old and long standing cases. In mild cases of dementia precox, we might administer a thorough course of thymus extract aided by lecithin, which is a phosphorus compound, and is indicated in the treatment of the active nervous symptoms of both, catatonia and Graves' disease. Dr. Bayard Holmes adds emphasis to the importance of this subject when he wrote: "There is no disease, not even general paresis, that finds the profession in so helpless and pitiable a condition as dementia precox does." There is no disease that costs the state a larger amount in care and custody than this disease. According to various estimates it represents about 25 per cent. of the total admissions to the institutions of the insane. (Ingham).

In view of these established facts, sanctioned by such men as Sajous, Dercum, Hochwart, Howell, and our L. F. Bark from whose able pens I have learn much and quoted liberally in the prep ration of this paper, let us as progressi medical men and humanitarians, give t subject of internal secretions more ze ous study, and use our influence towa the establishment of institutions for t study and treatment of psychiatry and i relation to internal secretions and met bolism. By this lofty endeavor we m relieve the profession of the stigma permitting 30 per cent. of our fellow mo tals to be doomed to die in the asylum f the insane.

"More might be said hereof to make
proof,
Yet more to say were more than
enough." B. C. K.

Roanoke, Va.

P. S. It is regretted that we were u able to publish the able discussion th followed the reading of this paper. (Ed

THE ADVANTAGES OF LOCA ANASTHESIA IN GOITER OPERATIONS.*

By Wm. F. Grigg, M. D., Richmond, Va.

In presenting this paper to you I clai nothing original in the technic of oper tion or after treatment of Goiter oper tions. But in the method of using th local anasthetic I am not aware of an one using it in this manner. The resul have been so universally good that I fe it would be well to mention them.

But before taking up the use of ana thetics want to say something about s lecting and preparing patients for oper tion. They should not be operated on i discriminately, but each case should b gone over carefully, and the entire conf dence of the patient obtained if you e pect success from local anasthesia, as th mental and nervious conditions must b as nearly cured as it is possible to do b fore patient goes to the hospital.

Every case should be given a fa chance to get well from medical trea ment, but it should be understood th non-operative treatment rarely afford more than temporary improvement an usually requires periodic repetitions treatment. If improvement is not strikingly marked and relatively lasting under medical treatment operation is indicated unless definite contra-indications are present.

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*Read at the Seaboard Medical Associatio Norfolk, Va.

Moreover early operations are indicated and unnecessary delay by unduly protracted non-operative measure is to be condemned for the following reasons. The operative risk is much less in an early than in an advanced stage of the disease, the heart and other organs have not sustained permanent damage, and the course of the disease being progressive it is probable in every case that operation will ultimately become necessary.

In urging the early operation Kocher emphasizes its special importance in the steady progressive, in contrast to the periodically progressive types of the disease.

In late stages or in acutely active periods of the disease a preparatory course of medical treatment with rest in bed on restricted diet with plenty of liquds is always advisable and often imperative, the aim beng to improve the condition of the patient so that operation may be undertaken with comparative safety.

Careful study of the blood for certain changes that usually occur in very active or long standing cases. Urine should be thoroughly examined for kidney changes. Dilated heart with low blood pressure with Myocarditis is a contra-indication for general anasthetic, and should not be operated on with local until all remedies had been tried, and then only with a thorough understanding with patient and family of the gravity of the condition.

Evidence of incipient Myxedema precludes further diminution of the thyroid secretion by operation.

Edema of feet and hands with a persistant Thymus when this can be demonstrated are contra-indications for an operation. When you have selected your case, patient should be put to bed at rest both mental and physical, liquid diet, some suitable laxative to keep bowels free. If very nervous sodium bromide grains twenty P. R. N. Blood pressure taken if low heart tonics, if high nothing stimulating and kidney eliminants, and keep absolutely quiet until pressure is down to where it is safe to operate.

The morning of operation I used the term morning as I find that they do much better if operated on early in the day because they become excited and nervous if they have to go over until the afternoon and then are not good subjects for operation. Two hours before operation give S. S. Enema. Thirty minutes before operation give quarter grain morphine and one hundred and fiftieth of a grain atropine, five minutes before operation morphine grains quarter and no atropine. Select the kind of incision you are going to make usually the collar incision will answer all purposes with a few modifications as the case may indicate.

Inject the superficial tissues with a solution of cocain 2-5 of one per cent. with fifteen drops of adrenalin solution one to one thousand to the ounce. This will give almost immediate anasthesia, and at the same time act as a phyalogical antidote for the large dose of morphine given prior to being placed on the operating table. At the same time solution is not strong enough to make patient sick at her stomach, because if they get sick at the stomach and vomit they lose confidence in themselves. This renders the operation more difficult. Do not inject the line of incision because the solution will distort the tissues and it is very necessary to recognize them in doing local work. Inject a wide margin around the field of operation thus cutting off all nerve supply.

When you have superficial tissues well injected with cocain then inject the deep tissues with Novocain solution four-fifths of one per cent. The Novocain is slow to act but its effects are much more lasting than cocain. There can be just as much of these solutions used as you want to as the morphine takes care of the untoward effects if there should be any toxic tendency of patient. By using the combination of morphine and cocain the patients leave the operating room bright and cheerful and show none of the ill effect of either drug as they do when used separately.

Am omitting the technic of the operation under local anasthesia as that differs only in minor details.

The chief advantages of local over general anasthesia are that deleterious effects on the kidneys, heart and lungs are avoided and injury to the recurrent laryngeal nerve is less likely to occur on account of the possibility of phonation in the conscious patient. They don't have to react as in general and less likely to vomit and struggle and cause injury to the tissues that have just been repaired. Less hemorrhage at the time of operation and post operative hemorrhage as the blood coagulated more readily. There is plenty of time for removing the gland without undue haste as the respiration is not interfered with as in general anasthesia. Not as much traumatism to tissues and likelihood of the parathyroids being removed which would cause death from tetany.

Not as likely to remove too much of thyroid gland as in a hasty operation, and cause death by myxedema. The patient recovers more promptly than from general anasthetic. Stay in the hospital is much shorter (usually 6 days), which is an item to be reckoned with, can begin giving liquids the moment patient leaves the operating room, which is a great factor in relieving toxemia.

The final summary is: Deaths are more frequent with general than with local anasthesia, and our great mission in this world is the conservation of human life.

10 W. Grace street.

Functional Paralysis Due to Motor Inactivity.—Hartenberg (Presse Medical), recognizes among possible causes of motor impairments occurring in the absence of any apparent organic nervous lesions such factors as reflex action, sympathetic disturbances, hysteria, and perhaps unknown changes in the central nervous system. Recently he has seen occasion to lay especial stress on prolonged inactivity of a limb or limb segment or groups of muscles as a cause of functional paralysis. Usually this occurs when a limb has been immobilized for some time because of a wound, inflammatory process, fracture, or even a mere pain. The supporting apparatus having been taken off, the joints are found stiff, the muscles torpid, and all the tissues sensitive. In pusillanimous, lazy, aboulic, or obsessed individuals, the required efforts at mobilization are not made, and to the initial disturbance a paralysis through inactivity is thus superadded. Peripherally, such conditions as muscular atrophy with subnormal irritability to electric stimulation; decalcification of the bones, joint stiffness, hypothermia, cyanosis, hyperhydrosis, and hypesthesia become established. Where the limb is habitually held in a faulty position, permanent loss of dynamic equilibrium between opposing sets of muscles occurs, and joint movement is correspondingly restricted. Further, the nerves supplying the inactive muscles will lose their conductivity and the spinal motor centres become weakened, thus increasing the tendency to muscular atrophy. The cortical kinesthetic centres themselves become torpid, kinesthesia and voluntary motion are impaired, and the affected limb practically passes from the consciousness of the patient, who carries the affected part around like a foreign body. Prophylaxis is based on the recognition that there is a critical time in such cases, at which the management of the patient governs the ultimate result. At this time prompt and energetic treatment, if necessary reinforced by disciplinary measures, will sometimes have to be resorted to if the morbid trend is to be avoided.

Wounds of Large Vessels at the Base of the Neck.—Metivet (Paris Medical), reports a case of laceration of the right subclavian artery by a shell fragment, with ligation of the vessel within the scaleni and recovery. Anesthesia proved unnecessary in this operation. The author lays stress on two special difficulties in such procedures at the base of the neck, the first being the cramping of the field of operation by the clavicle and the left hand compressing the bleeding vessel; the second, the necessity of operating with one hand, help fro man assistant being out of the question because of lack of room. A triangular flap, with the base outward, should be employed in exposing the site of injury. A silk thread should next be passed beneath the middle of the clavicle, to permit of prompt use of the Gigli saw in case it should prove essential to sever this bone to expose the vessel. The carotid artery may then be uncovered and examined, and after the subclavian vessels, outside of the scalene muscles. Finally, the lower attachments of the sternomastoid may be cut, to expose the first part of the subclavian artery, its branches, and the junction of the subclavian and jugular veins. As soon as blood spurts from the deep tissues the left index finger should exert pressure on the injured vessel. An attempt should be made to free this vessel, in order to be able to substitute a bulldog clamp for the digital pressure. Where neither clamp nor ligature can be applied, the clavicle should be sawed through by the assistant, a deep skin and muscle incision made down toward the axilla, the internal segment of the clavicle disarticulated, a large osteoplastic flap corresponding to the lines of incision turned outward and downward, and the ligation of the injured vessel, thus facilitated by the ample exposure afforded, proceeded with.

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EDWARD C. REGISTER, M. D., EDITOR

CHARLOTTE, N. C.

REMEMBER.

For the conduct of the war our normal export of wheat of 77,000,000 bushels must be increased to more than 200,000,000 to keep our Allies from starving, and to do this we must eat corn and breads made of mixed flours and not be as keen about wheat flour as we have been in the past.

We should eat all the perishable foods we can and only such quantities of non-perishable varieties as are necessary to get along with. The perishable foods that we should bear heavy upon at present are potatoes, vegetables, fish and poultry.

We have eaten too largely of sugar in the past, which is constipating and difficult of digestion, and not enough of sugars which are contained in fruit and such sugars as lactose, glucose and other varieties which have the same nutritive value as cane sugar.

The solution of food conservation is to eat more of some foods and less of others, and to waste nothing.

Do not use butter for cooking, use olive and linseed oil or perhaps oleomargarine. These give as satisfactory results as butter.

Eat all the vegetables and fruit you can. Vegetables and fruit in America are abundant, and the first have not been eaten as plentifully as they should and as plentifully as would be beneficial.

Save as much fat of lard and lard substitutes, bacon, butter and soaps as possible. These are important items to the Allies.

Remember that however much we conserve in food we are not going to starve. America is the greatest food-producing country in the world and there will always be enough for every one living within its shores.

This is a good time to harken back to the old-fashioned ways of living—a kitchen in the home ,and people in that home interested in the subject of foods and plain living. These have been rather neglected in the past, although they should have been entitled to first consideration at all times.

America calls upon all to join as voluntary workers in the hope that we can show in a democratic country a movement the result of which is equivalent in efficiency to autocracy which establishes and maintains efficiency by law and organization.

This should be done by voluntary effort, and this voluntary effort should be so complete that it will not require the Government to issue meal tickets as is the case in the European countries today.

America must win the war, and it devolves upon each and every person in the matter of foods to help.

DIAGNOSIS.

Diagnosis is the most important branch of medicine. It is like a compass to the helmsman steering a ship through a storm. The average American general practitioner of medicine has not paid as much attention to accuracy in diagnosis as he should. Every branch of medicine, sanitary, public and personal, requires early diagnosis, and the eradication of disease rather than its treatment in extreme stages. Surgery today is largely prophylactic, although the tendency in this branch of medicine has not been recognized. Medicine is gradually going that way, and the very heart of the subject is good diagnostic ability on the part of the medical men. Heretofore great attention was paid to the subject of therapeutics without there being sufficient knowledge of the actual cause of disease. This has been one of the things that has brought opprobium and criticism upon the medical profession, or rather upon the individual man. If you know what you have to deal with and the conditions surrounding it, you know wisely what to do. Common sense and judgment dictates this to you. Whenever possible men who are engaged in various branches of medicine should band themselves together in diagnostic cliques or in diagnostic institutions. The health of the nation is its most important asset, and the future of medicine is best conserved and best helped when we as servants of the people can be logical and direct. Each practitioner of medicine owes it as his duty to his constituents to be the best in diagnosis that is possible, and unless from time to time he sharpens his acumen in this, younger men fresh from the colleges and hospitals will outstrip him in the work. The people want quick and accurate service, recognizing the fact that illness is a liability, and they are willing to pay for accuracy in work and quickness of results. The average man in America loses more in money when he cannot work than he has to pay a practitioner of medicine for whatever treatments would be called for in the disease or condition. Therefore lose no opportunity to acquire knowledge in accuracy of diagnosis and have courage and confidence in installing these as ways and means in your practice.

GASTROENTEROLOGY.

There is probably no field of work in medicine which has made the progress that abdominal work has in the last fifteen or twenty years. For a number of years it was on the basis of assumption, and the only logical reason for the maintenance of the specialty was familiarity with the use of the stomach tube. With the advent of abdominal surgery and X-ray laboratories many of the mysteries of the abdomen have been opened up. Promptly a number of serious-minded men engaged in a careful study of the problems of digestive disorders, and in numerable instances careful physiologic and laboratory work methods were engaged in to study the problems of digestion. It may now be said that this specialty has come to stay, and while it is a part of internal medicine, it has become of such great interest and extent that here and there men are engaged in it accomplishing results which heretofore were not possible. The American Medical Association recognizing this fact, last year established a section of Gastroenterology and Proctology, the first new section that had been established in the great American organization of medicine for many years, and probably the only new one for many years to come.

If each practitioner will recognize the fact that almost a third of his general practice deals with disorders of digestion, it will become important for him to sharpen up his knowledge on this subject so that he can render a service better than it was possible for him to do upon the teaching of the under-graduate colleges of a number of years ago. There are many schools throughout the country which are now teaching the subject of diagnosis and therapeutics of stomach and intestinal disorders, and a few excellent books have appeared in recent years upon these diseases. Considering the fact that the standard of American medicine is rising very rapidly, and that after the war the tide of the students will be toward America instead of from America to foreign countries, it is important for each practitioner of medicine to engage in as careful a study of these disorders as time and opportunities will permit.

THE FAMILY DOCTOR.

There has been considerable speculation in recent years as to the probable future of the family doctor. This thought is no doubt emphasized because so many medical men are limiting themselves to some specialty in their practice, and to the tremendous increase in our knowledge in every department of medicine. In a manner it reminds one of the prediction that the horse would become extinct through the development of the automobile; and though ultimately this prediction may become true, it is slow of realization. Horses are nearly as numerous today as before the advent of the automobile and of greater value. While the family doctor may seem somewhat old fashioned, he will not be relegated to oblivion in our generation or time. The human mind is slow to discard an institution that has been fraught with so much benefit for so many generations. Through these years the family doctor has endeared himself to the hearts of the people. All manner of eulogy has been bestowed upon him. He has been friend, counsellor and help in times of stress and trouble; always considearte of others even to the neglect of his own health and fortune. Always giving and carrying in his great heart the sorrows, disappointments and joys of his little community. In return he has been thrice blest in the respect, love and esteem of all his patients.

To the good old family doctor, of sterling character; who is an honor to the community and to whom patients look with confidence and hope we extend the right hand of fellowship.

Long may you live and prosper.

THE MEDICAL CLINIC.

One of the modern developments in the practice of medicine is the clinc; a combination of specialists working together for the greatest ultimate good of the patient.

Clinics in a way are somewhat the mode at the present time. We find them everywhere, in the country villages and in the cities. Unquestionably the clinic is an effort in the right direction, where it is possible to find a group of men willing and able to work together and providing these men can be properly remunerated for the service rendered. The clinic has a special advantage in dealing with chronic and obscure ailments, ordinarily baffling to the individual physician. It is manifestly impossible, however, in the present state of society to treat all patients at a clinic, since but a small proportion of them are able to meet the expense which must necessarily be incurred. Naturally then, in the care of the sick, the great majority of patients must be cared for by the individual doctor. And fortunately this is not so difficult a problem as it would seem, since the number of diseases have not materially increased, however much the knowledge of medicine may have been augmented. Moreover the doctor in general practice comes in contact with but a limited number of diseases peculiar to his community, and where his diagnosis and treatment is largely a matter of routine. The worth-while doctor of today is a student and well posted in the latest medical lore; should he however meet with some case too difficult for his armamentarium the State usually stand sready to supply the needed assistance or he may have some fellow practitioner who can render just the aid required. G. N. B.

EDITORIAL NEWS ITEMS

Dr. B. C. Keister, late of Savannah, Ga., announces that he has moved to Roanoke, Va., and will devote his attention mainly to office and consultation practice along the line of General and Internal Medicine.

Dr. Seale Harris, of Birmingham, Ala., secretary of the Southern Medical Association and the editor of the Southern Medical Journal, and who is now in the medical service of the U. S. Army stationed at Washington in the Surgeon General's office, was in Charlotte a few days ago, visiting Camp Greene on professional business.

Dr. Harris' rank is Major. His visit to this office was enjoyed and appreciated.

The Southern Medical Association, at the Memphis meeting, voted unanimously to grant Major Seale Harris leave of absence during the war, so far as his activities as editor of The Journal and secretary of the association were concerned.

Dr. Robert S. Carroll, of Asheville, N. C., proprietor of the Highland Hospital, was married on the 28th of February in Chicago, Ill., to Miss Grace Potter.

Dr. Carroll is a very prominent alienist and has written a great deal of very valuable literature on this subject. He merits an abundance of happiness.

Dr. Frank M. Reade, of Richmond, Va., died February 26th, 1918. Dr. Reade was a teacher in the Medical College of Virginia for several years. He was born in Springfield, Mass., in 1863. He graduated from the Medical College of Virginia in 1899. For many years he was connected with the School of Pharmacy of Richmond, Va.

Government Hospitals for Asheville, N. C.—The Government has signed a contract for the lease of the Kenilworth Inn and the Cherokee Inn, at Asheville, and will purchase a site and build a hospital at Azalia, near Asheville, N. C. The two inns are to be used as reconstruction or rebuilding hospitals for United States fighting men, and the Azalia property will be developed into a great tuberculosis hospital. More than $1,000,000 will be put in the Azalia plant, which will be permanent.

Transactions of the Tri-State Medical Association of the Carolinas and Virginia, Nineteenth Annaul Session, held at Durham, N. C., February 21 and 22, 1917. Dr. J. Allison Hodges, Richmond, Va., President, Dr. Rolfe E. Hughes, Laurens, S. C., Secretary-Treasurer. Edited for the Association by Rolfe E. Hughes, M. D. Virginia Stationery Company, Richmond, Va. 1917.

It is always a pleasure to receive the annual volume of the Transactions of this association. This copy contains about two hundred and fifty pages ,and besides the handsome picture of the President, J. Allison Hodges, of Richmond, Va., several other illustrations appear, illustrating scientific papers.

The President's address was entitled, "The Spirit and Trend of Modern Medicine in the South." This address was well prepared and delivered in Dr. Hodges' graceful and easy manner. Dr. Hodges is one of the most accomplished orators in the medical profession on his large and intelligent audience.

Dr. Hughes, the editor of the volume, as usual, did his work well.

Dr. A. S. Rose, of Fayetteville, N. C., died February 16th from an attack of appendicitis. Dr. Rose was one of the leading physicians in Fayetteville, and that section of the state. He was a fine professional gentleman in every way, a true friend, one that could be relied upon.

Dr. Rose graduated from the University College of Medicine, Richmond, Va., 1901. He received his license the same year, and joined the State Medical Society in 1904. He attended the different medical meetings of the state with regularity and took a great deal of interest in things that had any tendency to build up the medical profession.

The Rockefeller Foundation Fund. Part of this $10,000,000 fund to be spent in 1918 by the Rockefeller Foundation, has been announced. The largest appropriation is $150,000 to be used in welfare work in the military camps, under the supervision of the Commission on Training Camp Activities, appointed by the Secretary of War. The National Committee for Mental Hygiene receives an appropriation of $37,000 "for surveys of public care of mental diseases and studies in psychopathology of crime." An appropriation of $6,000 is given to the State Charities Aid Association "for public clinics in New York State in after-care of infantile paralysis cases." The China Medical Board receives $11,430 to be used within five years in the maintenance of the two hospitals on the Island of Kulangsu. Provision has been made for bringing Chinese students to the United States for medical instruction.

Dr. Charles G. McManaway, of Charlotte, N. C., died February 19th, 1918. Dr. McManaway was ill for nearly a year. Cancer of the liver and stomach was the cause of his death. He was a practicing physician in this city for over twenty-five years and was a useful man both professionally and as a layman. He was a leading churchman and for many years an executive member in the Baptist church and on several occasions he took interest in local politics.

Dr. McManaway was a native of Virginia, having been born in Chamblissburg, September 2nd, 1857. He received his early collegiate education in Virginia, and at the age of twenty he attended the Louisville Medical College and subsequently graduated in a Baltimore medical college. Dr. McManaway was for several years a member of the Mecklenburg County Medical Society and also of the North Carolina Medical Society.

The Medical Society of the State of North Carolina will meet at Pinehurst, N. C., on the 16-17-18th of April, 1918.

Few physicians in North Carolina have ever visited this famous pleasure and health resort, and it is generally expected that the members of the society who attend this meeting will be pleased not only with the proceedings of the meeting itself, but the environments also.

The officers of the society for the Pinehurst meeting are as follows: President, Dr. Isaac W. Faison, Charlotte, N. C.; First Vice-President, Dr. Wm. DeB. MacNider, Chapel Hill, N. C.; Second Vice-President, Dr. Joseph B. Greene, Asheville, N. C.; Third Vice-President, Dr. Ben. F. Royall, Morehead City; Secretary, Dr. B. K. Hays, Oxford, N. C.; Treasurer, Dr. W. M. Jones, Greensboro, N. C.

The chairmen of sections of this meeting are as follows: Practice of Medicine, Dr. John Whitehead, Salisbury, N. C.; Surgery, Dr. L. W. Kornegay, Rocky Mount, N. C.; Gynecology, Dr. C. M. Strong, Charlotte, N. C.; Pediatrics, Dr. A. S. Root, Raleigh, N. C.; Health and Education, Dr. Chas. T. Nesbitt, Wilmington, N. C.; Physiology and Chemistry, Dr. L. H. Webb, Chapel Hill, N. C.; Pathology and Bacteriology, Dr. T. M. West, Fayetteville, N. C.; Anatomy, Dr. G. Alfred Aiken, Wake Forest, N. C.; Obstetrics, Dr. J. G. Blount, Washington, N. C.; Materia Medica and Therapeutics, Dr. Chas. W. Moseley, Greensboro, N. C.; Eye, Ear, Nose and Throat, Dr. J. W. McConnell, Davidson, N. C.

The North Carolina Health Officers' Association will be held on Monday the 15th preceding the meeting. The officers of that organization are as follows: President, Dr. D. C. Absher, Henderson, N. C.; Vice-President, Dr. M. T. Edgerton, Greenville, N. C.; Secretary-Treasurer, Dr. George M. Cooper, Raleigh, N. C.

This will be the eighth annual meeting of this organization and its meetings are usually interesting and a majority of the papers are scientific, practical and useful.

A more extended notice of the general meeting will be given in the April issue of The Journal, which will reach the majority of the members of the association prior to the meeting.

Dr. Samuel Boyd Little, of Colbert, Ga., died January 9th. The doctor was forty-eight years old and a graduate of the Southern Medical College, Atlanta, Ga., in the class of 1898.

Typhoid Fever in North Carolina. According to the vital statistics department and bureau of contagious disease of North Carolina, 839 people died from typhoid fever in 1914, 744 in 1915, 700 in 1916, and the records for 1917 indicate that we had only 600 deaths from this disease.

The very gratifying decrease in the number of deaths each year for several years past is believed to be due to improved sanitation around the homes, particularly to better screening, as well as the rather extensive anti-typhoid vaccination campaigns which have been carried on in a number of the more progressive counties. It is a fairly well established fact, that communities or counties that have been vaccinated for typhoid protection have developed fewer and milder cases, with fewer deaths. Typhoid fever is a preventable disease and should be eradicated entirely. Perfect sanitation and vaccination will do this.

Dr. R. L. Payne, of Norfolk, Va., died suddenly in Durham, N. C., on February 8th, 1918. Dr. Payne was born in Lexington, N. C., on March 28th, 1857. He was the son of Dr. R. L. Payne, of that city, a man who was well and favorably known all over North Carolina, and especially among the members of the medical profession.

Dr. Payne was educated at the University of North Carolina, and Jefferson Medical College, Philadelphia. In 1882 he married Miss Mary Emma Hankins. He practiced medicine in Lexington, N. C., from 1879 until 1896, then he moved to Norfolk, Va., and has been a successful physician and a prominent surgeon ever since.

For many years he was superintendent of health for Davidson County, N. C. At the time of his death he was the surgeon for the Southern Railroad and Chesapeake & Clyde Steamship Companies. He was Gynecologist to St. Vincent's Hospital, Norfolk; ex-member of the medical examining board of North Carolina. He was the medical director of the Jamestown Exposition. He was chief surgeon for the Norfolk & Southern Railroad Company. While a resident of North Carolina he served one term as president of the North Carolina Medical Society. He was ex-president of the Norfolk Medical Society, and of the Seaboard Medical Society. He wrote many valuable articles for the medical journals; he was an attractive speaker and a logical debater. Not only Norfolk, but Virginia and North Carolina as well, can ill afford to lose such a man as Dr. Robert Lee Payne.

Dr. Payne was in the class of the best medical gentlemen in this section of the south. He was a student not only of medicine and surgery, but he was familiar with the classics. Socially, he was a favorite. His personality was attractive and his social relations with people taught a lesson of very high ideals in life.

The Tri-State Medical Association of the Carolinas and Virginia, met in Charleston, S. C., on February 20-21. The meeting was not very largely attended, mainly on account of the fact that so many of the members were serving in the Army and Navy. On this account, a temporary scarcity of physicians throughout the country exists; a circumstance that makes it difficult for the different physicians to leave their respective homes. The meeting, however, was well attended and some very fine scientific papers read and freely and intelligently discussed.

Possibly one of the best papers presented was by Dr. Howard A. Kelly, of Baltimore, Md., entitled, "Radium in the Treatment of Fibroid Tumor Cases." The President's address, delivered by Dr. D. T. Tayloe, of Washington, entitled "Patriotism and the Physician," was well prepared, well presented and well received.

In the afternoon of the second day of the meeting, the following officers were elected for the ensuing year. Dr. R. S. Cathcart of Charleston, S. C., was elected president. Other officers named were Dr. Douglas Vonder Hoof, Richmond, Va., Dr. L. A. Crowell, Lincolnton, N. C., and Dr. F. A. Conrad, Columbia, S. C., vice-presidents; Dr. Rolfe E. Hughes, of Laurens, S. C., was re-elected secretary-treasurer.

The members of the executive council

elected were as follows: Dr. R. C. Bryan, Richmond, Va., Edward C. Register, M. D., Charlotte, N. C., and F. B. McLeod, M. D., Florence, S. C.

The next meeting of this association will be held in Richmond, Va., .on the third Wednesday of February, 1919. The meeting was held in the New Charleston Hotel, one of the best and most comfortable hotels in the south. Its managers are always on the alert to do things that will make their guests more comfortable and if possible, their environments more attractive.

Dr. Edward R. Stitt, formerly of Charlotte, N. C., who has for several years been president of the Naval Medical School, Washington, D. C., has recently been promoted to the rank of rear admiral of the U. S. Navy, by President Wilson. We have there now from the medical corps of the U. S. Navy, three rear admirals namely, the Surgeon General, George H. Barber, and Edward R. Stitt.

Dr. Stitt has written a great deal and is considered an authority on bacteriology, pathology and tropical medicine. He is a graduate of the University of South Carolina and received his degree of M. D. from the University of Pennsylvania. He was born in North Carolina, and entered the Navy as assistant surgeon in 1889. He was medical officer of the Nicaraguan Canal Commission in 1895. Later, while on duty at the Bureau of Medicine and Surgery, he took special courses in bacteriology at George Washington University. While cruising on the Hartford in the West Indies in 1899-1900 he continued his studies of tripical diseases. In 1905 Dr. Stitt attended the London School of Tropical Medicine, from wrich he received a diploma "with distinction," being graduated second in a class of forty. While commanding the Naval Hospital at Canacao he served as associate professor of medical zoology in the University of the Philippines.

In 1908 he was appointed to the chair of tropical medicine of George Washington University and in the Jefferson Medical College of Philadelphia. In 1911 he was naval representative of the Advisory Board of the Hygienic Laboratories of the United States Public health Service. In 1912-1913 he served as president of the American Society of Tropical Medicine. He is a member of the National Board of Medical Examiners.

BOOK NOTICES

To Arms! Songs of the Great War, by Laura E. Richards, of the Vigilantes, Author of "Captain January," "Melody," "Queen Hildegrade," "Five-Minute Stories," etc. Boston, The Page Company MDCCCCXVIII. Price, 75c.

Thi slittle book contains about forty pages. It contains several songs, some of them entitled "Come to the Colors," "The Transports," "The Woman's Burden," and several other titles of this character that would interest a great many people who would have the ability to appreciate literature of this kind.

Florida the Land of Enchantment, Including an Account of its Romantic History from the Days of Ponce de Leon and the Other Early Explorers and Settlers, and the Story of its Native Indians; A Survey of its Climate, Lakes and Rivers and a Description of its Scenic oWnders and Abundant Animal and Bird Life; and a Comprehensive Review of the Florida of Today, as a State Important for its Industries, Agriculture and Educational Advantages as well as the Unsurpassed and Justly Celebrated Winter Resort of America, with Unparalleled Attractions for Health and Pleasure Seekers, Nature Lovers, Motorists and Sportsmen, by Nevin O. Winter, Author of "Texas, the Marvelous," "The Russian Empire of Today and Yesterday," "Mexico and Her People of Today," etc., with a map and fifty-six plates, of which eight are in color. The Page Company, Boston, MDCCCCXVIII. Price, $3.50.

Mr. Winter has certainly given us in this volume a valuable historic story of the famous and interesting things of Florida, one of our best states. It was a happy thought when he selected some of the subjects that have made him so well known all over this country. His book entitled "Texas, the Marvelous," "The Russian Empire of Today and Yesterday," etc., are books of value and are popular. They have been gotten up in such a way that they combine accurate history, presented in such a way that they are read with enthusiasm as well as with profit. The map that is shown in the volume seems to be quite accurate and adds to the value of the book, and the 56 plates are beautiful. We recommend the book. It is well worth the selling price, which is $3.50.

Transactions of the Twenty-Third Annual Meeting of the American Laryngological, Rhinological and Otological Society, Held in Atlantic City, N. J., May 31st and June 1st, 1917, New York. Published by the Society. 1917.

We are always glad to receive the annual volume of Transactions of this Association. This volume is very handsomely bound and contains 363 pages. One of the illustrations is a group photograph of the ex-presidents from 1896 to 1918, covering a period of twenty-two years. Several faces in this group are familiar, one of them is the celebrated Dr. Joseph A. White, of Richmond, Va., who was president in 1914.

Mt. Blossom Girls, or, New Paths From the Blossom Shop, by Isla May Mullins, Author of "The Blossom Shop," "Anne of the Blossom Shop," "Anne's Wedding," Etc., Illustrated by John Goss. The Page Company, Boston MDCCCCXVIII.

This is an interesting novel. It is the fourth and last volume of the Blossom Shop Series. The author is a popular and attractive writer and has made many admirers among the large numbers of readers of this series of popular novels.

This book, has for an underlying thread, ideals of the same type which characterizes former volumes. All of the volumes of this series teach useful lessons and are presented in an interesting and attractive style.

A Practical Text-Book of Infection, Immunity and Specific Therapy, With Special Reference to Immunologic Technic. By John A. Kolmer, M. D., Dr. P. H., M. Sc., Assistant Professor of Experimental Pathology, University of Pennsylvania, with an introduction by Allen J. Smith, M. D., Professor of Pathology, University of Pennsylvania. Second Edition Thoroughly Revised. Octavo of 978 pages with 147 original illustrations. 46 in colors. Philadelphia and London: W. B. Saunders Company, 1917. Cloth, $7.00 net; Half Morocco, $8.50.

The first edition of this book was well received and greatly appreciated. In the second edition, the purpose of the work and the general plan of the volume remains unchanged. The work is thoroughly practical for medical students, practitioners, and laboratory workers. In this volume, theories and opinions are stated simple and plainly and comparatively brief. The writer has devoted particular attention to technic and the practical phases and application of the subjects considered.

Many evidences of additions and alterations have been made throughout the book, in this the second edition. Special attention has been given to the subject of focal infection; the Schick toxin test for immunity in diphtheria and active immunization in diphtheria with toxin-antitoxin mixtures; complement-fixation in tuberculosis and other bacterial infections and a quantitative Wassermann reaction based upon the author's own experience and studies, have been revised and particular attention given the subject of anaphylactic skin reactions. The section on the treatment of certain of the acute infectious diseases, and particularly acute anterior poliomyelitis, with the serum of convalescents and normal persons has been amplified; blood transfusion has been included.

This is a very large book of 978 pages. The 46 colored plates are very fine and the 147 original illustrations are good. Dr. Kolmar is a fine writer and a splendid teacher. This large book is of great value to the medical profession and will be thoroughly appreciated and used extensively.

Essentials of Prescription Writing (Second Edition, Reset), by Cary Eggleston, M. D., Instructor in Pharmacology, Cornell University Medical College, New York City. Second Edition. Reset. 32mo. of 134 pages, Philadelphia and London: W. B. Saunders Company, 1917. Cloth, $1.25 net.

This small volume is intended to provide students of medicine with a succint, yet sufficient, treatment of the subject of prescription writing. It is written to prepare medical students or the beginners of the practice of medicine, to construct a grammatic and proper prescription to fill any need. This is certainly a very important thing for the practitioner to know and be familiar with. It always creates a bad impression on the prescriptionist or pharmacist to notice the badly or improperly constructed prescription, and it also creates equally as bad an impression when noticed by his intermediate associates in the practice of medicine.

Clinical Lectures on Infant Feeding, by Lewis W. Hill, M. D., Children's Hospital, Boston and Jesse R. Gerstley, M. D., Michael Reese Hospital, Chicago. 12mo. of 377 pages illustrated. Philadelphia and London: W. B. Saunders Company. 1917. Cloth, $2.75 net.

In the preface of this book the statement is made that these lectures represent a somewhat new method of postgraduate medical education in this country, the history leading to their development may be of interest. The plan originated with Dr. W. S. Rankin, Secretary of the Board of Health of the State of North Carolina. He conceived the idea of bringing the medical school, in the person of a traveling lecturer, to the doors of the physician, enabling the latter in this way to continue with his practice instead of being compelled to leave it for several months while he sought postgraduate education in one of the large medical centers. Upon hearing of this scheme, President E. K. Graham, of the University of North Carolina, gave it his enthusiastic support, and courses were arranged under the joint auspices of the University and the State Board of Health. Two sections of six classes each were organized, one in the eastern part of the State and one in the western part of the State. Each of the lecturers had six towns in his circuit and traveled each day to a new town, returning to the first one at the beginning of each week. One of the lecturers was trained in the methods used in Boston, the other in Chicago, with postgraduate work in Europe. As a result of this dissimilarity in the two methods of training the lectures differed a good deal, and it occurred that it might be of value to combine the two sets of lectures into one volume so that the teachings of two somewhat different schools of infant feeding might be compared.

It seems that each of the lecturers had prepared and presented his course of lectures independent of the other and without knowledge of the others methods and plans. In the publication of these lectures the spirit of the writers was co-operation, rather than rivalry. Their idea was to make the work one of construction rather than destruction.

This book is instructive from beginning to end, and it would certainly be well enough for every one who is interested in modern methods of feeding infants to read it and study it carefully. The volume is rather small, but it contains 377 pages and is very well gotten up by the publishers.

The Immediate Care of the Injured, by Albert S. Morrow, A. B., M. D., Clinical Professor of Surgery in the New York Polyclinic; Attending Surgeon to the Workhouse Hospital and to the Central and Neurological Hospital; Major, Medical Department, Officers Reserve Corps of the U. S. Army. Third Edition, Thoroughly Revised, Philadelphia and London. W. B. Saunders Company. 1917.

This is the third edition of this book, entitled the Immediate Care of the Injured, with 355 pages and 242 illustrations, printed on heavy white enameled paper. It makes a book of nice size and of a very attractive appearance.

Dr. Morrow is well known as the clinical professor of surgery in the New York Polyclinic, and on account of the numerous valuable contributions he has given to the medical profession, through Journals and Magazines, etc., besides he has written several books on subjects pertaining to surgery.

In the preparation of the third edition, the text has been carefully revised, and certain sections entirely re-written in order to have them conform with our present knowledge of the subject dealt with. Parts I and II have been somewhat condensed ,and some new material has been incorporated in Part III. The general plan of the book, however, is similar to that followed in previous editions. The volume furnishes a reliable guide to those who wish to learn how to render safe and efficient aid in accidents and other emergencies.

The book is so written and constructed, that is it useful to the layman. The subjects considered have been presented in as simple language as is consistent with clearness, technical terms being omitted as far as possible, conseqeuntly this book should appeal to thousands of intelligent men. This character of a book should be greatly appreciated, because thousands of people are unfortunate enough to be situated where medical aid cannot be attained sometimes for days or weeks, and it is this circumstance that the book fulfills the place that has not previously been provided for. The illustrations are thoroughly practical and illustrate the text properly. Books of this character without adequate illustrations are comparatively of little value.

Wire-Netting Instead of Wood for Surgical Splints

A new kind of surgical splint in which galvanized wire-netting takes the place of wood, has been put on the market, says The Popular Science Monthly for March. It has been tried and offers many advantages. The steel entering into the construction of this woven wire splint is so tempered that it can be molded by hand. Being galvanized, the wire is sterilized and at the same time welded into a single piece that cannot fray out at loose ends. As it is porous, it allows a certain amount of evaporation and air circulation to the dressings beneath, which wood or plaster does not. The splint comes rolled like a bandage and is lighter and less bulky than wooden splints.

Nursing Ethics. A Lecture, by Percy C. Kirkpatrick, M. D., Fellow and Registrar of the Royal College of Physicians of Ireland. Dublin: Printed at the University Press, by Ponsonby and Gibbs, 1917. Price 55c.

This is a booklet of 38 pages. It deals with a subject that every nurse should be familiar with, and physicians and surgeons who employ nurses should read it. A physician who is familiar with this subject and who comes in contact with training schools for nurses, and graduated nurses, doing either hospital or private nursing, can see frequently, really every day, many evidences that nurses have been taught very little about their proper relations towards each other, towards the family and towards the physician.

Miscellaneous.

Labor Complicated by Emphysema.—Murray (British Med. Jour.), was called to a primipara who was attended by a midwife and had been in labor fourteen hours. She presented a most alarming appearance. The face was scarlet and swollen to twice its normal size, both eyes being completely closed. The upper part of the chest wall and neck were much swollen and the affected parts presented the appearance of subcutaneous emphysema, being soft to the touch and with fine crepitations. This was interfering with respiration, so that the patient seemed to be in a dying condition. It was thought best to immediately deliver by forceps and a very large child was born. Twenty-four hours after labor the emphysema had somewhat subsided. The condition had undoubtedly arisen from the efforts of the patient in straining, probably with the mouth closed. Similar cases on record show that this accident is preceded by strong contractions of the uterus supplemented by vigorous general exertions on the part of the mother. While the condition is alarming at first sight it is rarely attended by much danger to life.

The Lobar Pneumonia Problem in the Army.—Nichols (Military Surgeon), considers lobar pneumonia an especially important disease among soldiers, and states that it is to be expected in large camps in the winter months. The doctor reports an epidemic and states that some suggestions of progress were reached which should improve the method of handling pneumonia in the Army. Through the differentiation of types or strains of the pneumococcus it has been shown that the majority of cases of lobar pneumonia are due to the introduction from without of epidemic types of the organism. This has thrown light on baffling questions of epidemiology; it is now possible to trace the spread of infection by types and to detect infected contacts and "carriers." The question of preventive inoculation can be approached with some confidence in the reliability of type immune reactions. Inclusive evidence as to the value of specific serum heretofore has been due to the lack of knowledge concerning types. The use of type serum for a type infection has greatly reduced the mortality. Direct evidence of contagion has been demonstrated, based on the determination of types. Pneumonia is now classed with meingitis and diphtheria, with the same method of transmission and problem of prevention. If effective the use of vaccination for prevention is considered a far more promising measure than isolation.

Council of National Defense.—The Council of National Defense authorized the following statement:

For the purpose of completing the mobilization of the entire medical and surgical resources of the country, the Council of National Defense has authorized and directed the organization of a "Volunteer Medical Service Corps," which is aimed to enlist in the general war-winning program all reputable physicians and surgeons who are not eligible to membership in the Medical Officers' Reserve Corps.

It has been recognized always that the medical profession is made up of men whose patriotism is unquestioned and who are eager to serve their country in every way. Slight physical infirmities or the fact that one is beyond the age limit, fifty-five years, or the fact that one is needed for essetnial public or institutional service, while precluding active work in camp or field or hospital in the war zone, should not prevent these patriotic physicians from close relation with governmental needs at this time.

It was in Philadelphia that the idea of such an organization was first put forward, Dr. William Duffield Robinson having initiated the movement resulting in the formation last summer of the Senior Military Medical Association with Dr. W. W. Keen as president—a society which now has 271 members.

Through the Committee on States Activities of the General Medical Board the matter of forming such a nation-wide organization was taken up last October in Chicago at a meeting attended by delegates from forty-six states and the District of Columbia. This Committee, of which Dr. Edward Martin and Dr. John D. McLean—both Philadelphians—are respectively chairman and secretary, unanimously endorsed the project. A smaller committee, with Dr. Edward P. Davis, of Philadelphia as chairman, was appointed to draft conditions of membership, the General Medical Board unanimously endorsed the committee's report, the executive committee—including Surgeons General Gorgas of the Army, Braisted of the Navy, and Blue of the Public Health Service—heartily approved and passed it to the Council of National Defense for final action, and the machinery of the new body has been started by the sending of a letter to the State and County Committees urging interest and the enrollment of eligible physicians.

It is intended that this new corps shall be an instrument able directly to meet such civil and military needs as are not already provided for. The General Medical Board holds it as axiomatic that the health of the people at home must be maintained a sefficienly as in times of peace. The medical service in hospitals, medical colleges and laboratories must be up to standard; the demands incident to examination of drafted soldiers, including the reclamation of men rejected because of comparatively slight physical defects; the need of conserving the health of the families and dependents of enlisted men and the preservation of sanitary conditions—all these needs must be fully met in time of war as in time of peace. They must be met in spite of the great and unusual depletion of medical talent due to the demands of field and hospital service.

In fact, and in view of the prospective losses in men with which every community is confronted, the General Medical Board believes that the needs at home should be even better met now than ever. The carrying of this double burden will fall heavily upon the physicians, but the medical fraternity is confident that it will acquit itself fully in this regard, its members accepting the tremendous responsibility in the highest spirit of patriotism. It will mean, doubtless, that much service must be gratuitous, but the medical men can be relied upon to do their share of giving freely, and it is certain that inability to pay a fee will never deny needy persons the attention required.

It is proposed that the services rendered by the Volunteer Medical Service Corps shall be in response to a request from the Surgeon General of the Army, the Surgeon General of the Navy, the Surgeon General of the Public Health Service, or other duly authorized departments or associations, the general administration of the corps to be vested in a Central Governing Board, which is to be a committee of the General Medical Board of the Council of National Defense. The State Committee of the Medical Section of the Council of National Defense constitutes the Governing Board in each State.

Conditions of membership are not onerous and are such as any qualified practitioner can readily meet. It is proposed that physicians intending to join shall apply by letter to the Secretary of the Central Governing Board, who will send the applicant a printed form, the filling out of which will permit ready classification according to training and experience. The name and data of applicants will be submitted to an executive committee of the State Governing Board, and the final acceptance to membership will be by the national governing body. An appropriate button or badge is to be adopted as official insignia.

The General Medical Board of the Council of National Defense is confident that there will be ready response from the physicians of the country. The Executive Committee of the General Medical Board comprises: Dr. Franklin Martin, chairman; Dr. F. F. Simpson, vice-chairman; Dr. William F. Snow, secretary; Surgeon General Gorgas, U. S. A.; Surgeon General Braisted, U. S. Navy; Surgeon General Rupert Blue, Public Health Service; Dr. Cary T. Grayson; Dr. Charles H. Mayo; Dr. Victor C. Vaughan; Dr. William H. Welch.

Early Mobilization in the Treatment of Wounds.—Kouindjy (Presse Medicale), reports the case of a soldier injured by barbed wire in whom a felon developed on the right ring finger; this, in turn, was complicated by phlegmonous inflammation. The arm having been immobilized for five months, the patient showed partial ankylosis of the shoulder, almost complete ankylosis of the injured finger, and stiffness of the wrist and other fingers. Contrasting with this case one of shell wound of the arm, with compound fracture of the humerus, in which, immobilization having been instituted for only twenty days and followed by systematic mobilization of all the joints of the extremity, the patient was soon back on the firing line. Kouindjy strongly urges early mobilization in all war traumatisms, except in the presence of acute or suppurative arthritis.

Serum Treatment and Prophylaxis in Acute Sore Throat with Hoffman Bacilli.—Nobecourt (Bulletins et Memoires de la Societe Medicale des Hopitaux de Paris), lays stress on the fact that by the use of glucose agar in Veillon's culture tubes, differentiation of the true diphtheria bacillus from the Hoffmann pseudodiphtheria bacilli, as shown by Martin and Loiseau, is a possibility from the practical standpoint. Comparing for a period of fifteen months the clinical manifestations in a large number of soldiers with actual or suspected diphtheritic sore throat, Nobecourt found that where lone bacilli were obtained the throat usually presented the clinical features characteristic of diphtheria; where the bacilli were of intermediate length, such features were less often present, while in the case of short bacilli, they were exceptional. On admission, before bacteriological examination, antitoxin injections were given whenever the clinical condition was such as to suggest diphtheria. Under these circumstances it was noted that antitoxin had been administered in eighty-five per cent. of the long bacillus cases, fifty per cent. of the intermediate, and eight per cent. of the short bacillus cases. All the patients recovered except one with long bacilli and early bulbar disturbance. From these observations the conclusion is reached that antitoxin is only exceptionally indicated in short bacillus cases, oftener in intermediate cases, and still more frequently in long bacillus cases. The Veillon culture method yielding unmistakable. results only after four or five days, clinical features must continue to regulate the indications for antitoxin in the presence of established disease. From the standpoint of prophylaxis, however, careful differentiation between the several lengths of bacilli in convalescents and carriers disappeared at two successive examinations, as required by military regulations, only after seven to forty-four days. In view of the relative mildness of short bacilus affections, their low power of contagion, and their actual scarcity, only thirteen per cent. of the entire number, the period of segregation and idleness in such cases could, with the aid of the bacteriological test, be with little risk shortened.

Gunshot Wounds of the Chest.—Anderson (British Medical Journal), urges the adoption of measures to combat infection in chest wounds similar to those commonly employed in wounds of other parts. Anesthesia by nerve blocking through injections of 0.5 per cent. novocaine solution in the intercostal spaces behind the angles of the ribs is the best method for the majority of cases. General anesthesia may be used with care when needed. A localizing X-ray examination should be made before operation where possible. The principles of operation should include the complete excision of the entrance and exit wounds in the chest wall with removal of all fragments of broken rib. If there is collapse of the lung and hemothorax the pleural cavity should be wiped out. The foreign body should be found by inspection or palpation and removed, even if this requires the enlargement of the wound. When the body is embedded in the marginal portion of the lung it is often best to excise the damaged part of the organ and suture the fresh wound. When the pleural cavity is properly cleaned and hemorrhage has been controlled antiseptics such as flavine or brilliant green solutions may be used, but their value has not yet been determined. The opening in the chest wall should then be closed by suture of the pleura, if possible, followed by separate suture of the muscular and skin layer. Where the pleura cannot be sutured a muscle flap may be used to close the opening. Just before the placing of the last stitch and its tying the patient should be made to empty the pleural cavity of as much air as possible by forcible attempts at expiration while the glottis is closed. The practice of these principles of treatment in a considerable series of very severe wounds led to the saving of a large proportion of cases and rapid improvement in many others which would have progressed but slowly to ultimate recovery.

Antiseptic Properties of Acriflavine and Proflavine, and Brilliant Green.—Browning and Thornton (Brit. Med. Jour.), say that flavine compounds and brilliant green are antiseptics which exert a slowly progressive bacterial action. Concentrations of these substances, which at first inhibit and finally kill bacteria, are without harmful effect on phagocytosis or on the tissues locally or generally; hence they are specially suited for therapeutic purposes in infected wounds. Flavine compounds may be applied to the peritoneum with safety. Flavine (acriflavine and proflavine) are enhanced in their bactericidal potency by the presence of serum; brilliant green, in common with most other antiseptics, is reduced in its activity by serum. The most suitable method of application of an antiseptic for therapeutic purposes must depend very greatly on its behavior in the presence of serum. When the serum is inactivated by serum, frequent renewal of the watery solution is indicated as in Carrel's procedure; this, of course, is only permissible provided that the substance is not in itself toxic. Brilliant green satisfies the requirements for application by repeated irrigation, as a powerful bactericidal solution (1:2000) is innocuous to the tissues. On the other hand, since flavine compounds are most bactericidal in serum, the indication is to arrange the wound dressing so that these antiseptics may act in a serum medium; also, since these bodies are not rapidly thrown out of action by serum, accumulative deposit should be prevented by avoiding too frequent additions of considerable quantities of the antiseptic solution. Clinical experiences have substantiated these conclusions, and the evidence at disposal points to the application of flavine bodies, by means of gauze packing or some appropriate modification of this procedure, as likely to yield the best results. Thus there is evidence that by taking full advantage of the properties of flavine bodies a relatively simple technic may be followed. The application of the flavine compounds, especially for the purpose of preventing the onset of septic manifestations in early wounds, is emphasized; also their use for preventive exacerbations after operating on areas already infected. Operative measures are an essential preliminary to the effective use of therapeutic antiseptics in wounds, since the antiseptic can act only when brought into intimate contact with the infected tissues.

Treatment of Persistent Contractures Following Tetanus.—Leon Berard and Auguste Lumere (Bulletin de l'Academie de Medicine), note that since preventive serum injections have been systematically enforced in wound cases, the most rebellious symptom of tetanus has proved to be a permanent contracture of the injured limb. Where fracture coexists, attempts at reduction result in complete failure, faulty union and deformity following. In the absence of fracture, the contracture, persisting several months, is accompanied by joint stiffness resulting in prolonged disability hitherto wholly refractory to active or passive mobilization and all other therapeutic measures. Pain is also a marked feature at first. Early removal of the contracture being obviously the best treatment, regional anesthesia through injections of a 1.5 per cent. solution of novocaine, with one drop of adrenalin solution per mil, was practised by the authors. In the case of the upper extremity, the injections were made about the brachial plexus, and in involvement of the lower limb, at the site of emergence of the sciatic nerve and in the vicinity of the nerves supplying the contracted groups of muscles. Although, as a rule, the opportunity was had only to apply the method several weeks after the onset of contracture, excellent results were obtained, as illustrated in five reported cases. Freqeuntly the first injection was sufficient almost completely to overcome the condition, though generally several injections were given. The period of motor disability is greatly shortened by the treatment.

Wounds of the Kidney and Renal Hilum.—Patel (Paris Medical), states that war wounds of the kidney alone, as well as wounds of two or more organs with the renal injury the main feature, have been rather uncommon. Two cases he has seen had shell fragments in the renal pelvis, and both presented precisely the clinical picture of stone in the kidney. Neither had presented any sign of severe hemorrhage at the time of the injury, though urine was believed to have issued from the wounds for a time. Both had been treated conservatively. The doctor, after exact X-ray localization, removed the shell fragments by pyelotomy, both patients recovering. A third patient, with a shell fragment in the substance of the kidney, died of infection and hemorrhage before operation was feasible. In the diagnosis of renal wounds, the site of the injury—in the lumbar or lower thoracic region—is an important indication. Copious hemorrhage through the wound is only vaguely significant. Hematuria is a valuable sign, but was absent in one case in which the vascular pedicle had alone been injured, without tear of the pelvis or deep laceration of the kidney tissue. The absence of all peritoneal reaction in both of the cases, reported in detail, indicated that the peritoneum had escaped injury. Nephrectomy in two cases is justified on the ground of hemorrhage requiring immediate intervention. In one of these cases the hilum had been wounded and in the other packing or suture would probably have failed or serious secondary hemorrhage followed. A conservative operation is advocated only for superficial injuries of the renal substance. Nephrectomy was extremely well borne in both instances, polyuria setting in at once after the operation.

Repair of Injuries to the Skull by Perforated Plates.—Mitchell (British Journal of Surgery), says that for some time past he has been in the habit of repairing gaps in the skull by the use of very thin perforated silver plates. The silver is rolled out a little thinner than an ordinary visiting card and is then punched with holes one eighth of an inch in diameter, as close together as possible. This has the following advantages: Being very thin the plate can be readily adapted to the convexity of the skull; the perforations have the advantages that they lighten the plate; they admit of the escape of blood and other fluid, so as to avoid compression by accumulation between the plate and the dura or brain; and they provide a simple means of fixing the plate in position. The technic of the procedure is as follows: The plate, which can be cut to any required size by strong scissors, is applied thus: A large flap of scalp is turned down; the opening in the skull is explored, any foreign body is removed, adhesions are freed, and bleeding is arrested; the periosteum is now carefully raised from the skull for about half an inch all round the gap; the plate, cut the necessary size and shape, half an inch in diameter larger than the opening it is desired to close, is now slipped under the reflected periosteum and fixed in position by a series of catgut sutures which, by the aid of a fully curved needle, are carried through the periosteum and out through any of the perforations in the plate which are most convenient. In this way the plate is securely fixed in position and cannot slip. The scalp flap is now sutured in position and a drainage tube inserted at the most dependent angle for twenty-four hours, otherwise a hematoma is very likely to form.

Emetine in the Treatment of Bilharzian Hematuria.—Diamantis (Journal d'Urologie), points out that bilharziosis in itself causes but little subjective inconvenience unless tissue proliferation due to elimination of the parasitic ova happens to take place near the ureter or in the prostatic urethra. The great danger in this disease is the urinary infection which sooner or later becomes superadded. Specific treatment, however, is possible only in the uninfected stage, in which the patient merely exhibits hematuria at the close of micturition and occasionally a distinct parasitic anemia. While in already infected cases, except in the presence of only a catarrhal cystitis without infiltration of the floor of the bladder or the prostate, emetine had no favorable action, he found it to have a striking effect in the uninfected cases, a series of about twenty intravenous injections of the remedy yielding a complete clinical cure. The drug does not produce its effect as a hemostatic, for it had no action on hematuria in a case of tumor of the bladder; in hilharziosis the hematuria does not reappear when the drug is stopped, and furthermore, it causes the ova to disappear from the urine. It must therefore act as a specific, and if it does not kill the worm, it at least arrests the formation of ova. The initial amount given is 0.02 to 0.03 gram, the dose being then increased rapidly to 0.05, 0.07, and 0.1 gram. Small doses are inefficient. The injections are given at intervals of two or three days, until a clinical cure results; this usually requires fifteen or twenty injections, though one case recovered under eight injections. In children the drug is given subcutaneously. In some patients, recovery is already of twenty-two months' standing. No serious result has attended the use of the large doses mentioned, though dizziness is regularly produced, together with marked lassitude, coated tongue, swollen gums, and salivation, which rapidly pass off when the drug is discontinued.

Gynecological Preparedness.

Gynecological preparedness means, then, that each and every case which presents itself for clinical observation and which shows any irritation of the uterus or its appendages should immediately be placed under treatment, because prompt and logical treatment in these cases may prevent more disastrous results.

Hayden's Virburnum Compound seems the logical treatment, because it is a scientific preparation of acknowledged therapeutic efficiency, depending upon Virburnum Opulus and Dioscorea Villosa, whose active principles are best presented through their careful selection and scientific compounding, in combination with simple carminatives. Hayden's Virburnum Compound does not contain any narcotics, nor does it leave any disagreeable or unpleasant after effects.

Again as we have shown and as any one may find in the textbooks of "Materia Medical and Therapeutics," Virburnum Opulus and Dioscorea Villosa are considered by eminent authorities as the proper drugs for pelvic diseases; while noted writers, like Sims, Davenport and Culbreth, lay special stress upon the value of Hayden's Virburnum Compound in this class of diseases.

A Palatable Cod Liver Oil.

No one disputes the remedial value of cod liver oil—the only question involved is one of palatability.

Nearly a generation ago the Katharmon Chemical Company introduced to the medical profession a preparation of cod liver oil which, while palatable, possessed every virtue of the plain oil. This product, Cord. Ext. Ol. Morrhuae Comp. (Hagee) has steadily grown in favor and today is widely used by physicians, by whom it has been subjected to the most searching clinical tests.

The advantages of immunization against diphtheria have been well demonstrated. The records of the New York City Health Department—80,000 immunized with a morbidity of 0.2 per cent.—furnish ample evidence of the value of diphtheria antitoxin in combating this disease.

An antitoxin of high potency, small bulk and low protein content is supplied by Eli Lilly & Company, Indianapolis. This product is prepared under aseptic conditions by improved methods of concentration and purification.

Many experienced clinicians recommend 5,000 units in mild cases; in moderate cases 10,000 units, and in severe cases 20,000 units. Diphtheria antitoxin should be given at once when evident clinical symptoms of diphtheria are present and the Lilly product can be supplied quite readily, through the drug trade, in convenient syringe packages.

Another product of the Lilly Biologicals Laboratories that is eminently satisfactory to physicians is Small-Pox Vaccine Virus, Lilly. In primary vaccinations this virus is said to yield the maximum percentage of "takes." The searching tests made at the Lilly Biological Laboratories to determine the potency and purity of vaccine virus is assurance that the product will give satisfactory results if proper cold storage precautions have been observed.

Therapeutics of the Cardiopulmonary Circulation.—Colleville (Presse Medicale), reports studies on the pulse or differential blood pressure as influenced by various drugs, with general exercise and breathing exercises superadded. The ratio of systolic pressure to diastolic pressure is deemed of far greater import, from the therapeutic standpoint, than the actual difference between the two or pulse pressure. Stress is laid on the myocardium, circulatory dynamism as a whole, and the condition of the nervous system as the three main factors in the regulation of blood pressure. Blood viscosity is also an important feature. The author employs the Pachon oscillometre as a means of working out precise therapeutic indications in the presence respiratory or nervous deficiency, retention of toxic products through emunctory impairment, insufficiency of the pulmonary circulation, or myasthenia or debility of the general vascular tension. Radional medication of the pulmonary circulation generally involves the use of diuretics and vasodilators to reduce excessive circulatory resistance, sometimes with heart tonics given in addition. Terpine, sodium benzoate, acting as diuretics and liquefying bronchial secretions, together with codeine, which allays cough and amplifies respiration, constitute a triad of remedies serving to unload peripheral resistance of the pulmonary and the general circulation. Quebracho combined with lobelia notably amplifies the respiration and secondarily imparts greater elasticity to the lesser circulation, without exerting any special effect on the general circulation. Caffeine iodide acts as a tonic to the lesser circulation. Fibrolysm, loosening recent pleural adhesions, restores play to the pulmonary apparatus and especially the lesser circulation. Adrenalin acts with special strength on the lesser circulation as vasoconstrictor. Strophanthin stimulates the lesser circulation without acting on the general circulation; lobelia increases this action. Sodium iodide influences blood viscosity and overcomes pulmonary stasis; iodoglysol acts even more strongly in this direction.

Artifiicial Sunlight.—Within the last few years the therapeutic value in surgical tuberculosis of exposure to sunlight has become established, owing a good deal to the practice of Rollier of Leysin. Except in southern climates, however, or those of the high Alps, where the sun shines strongly throughout the year, winter causes an inconvenient interruption to the treatment, which generally needs to be of long duration. Accordingly attempts have been made to substitute for the sun's rays, when absent, an artificial light ,employing until recently that furnished by the mercury-quartz vapor lamp. The results have, on the whole, been inferior to those obtained by natural heliotherapy, and in several communications lately the carbon arc light is mentioned as being preferable, it is conjectured as exerting greater penetrative power. Some workers at the Finsen Medcinial Light Institute, Copenhagen, have reported (Hospitalstidende, 1917, Nos. 19, 20) on the subject.

Reyn and Ernst summarise their experiences as follows: (1) The carbon arc light can satisfactorily replace the sunbath; (2) light alone without other clinical means can cure surgical tuberculosis; (3) light baths are a valuable mode of treatment in lupus; (4) the carbon arc light is better for the purpose than the mercury-quartz, and should alone be used whenever possible. The varieties of surgical tubercle treated comprised lupus, favorable results being claimed in cases resistant to other measures alone, and tubecle of lymphatic glands of bone and joint, of the peritoneum, and of soft tissues. The last-named lesions responded best. As a rule, ordinary surgical measures seemed to be combined with the light treatment, which was not directed only to the site of disease, but generally to the surface of the whole body. Other workers (Mol in Holland and Collins at a Danish sea bathing hospital) supplemented the carbon arc illumination with ordinary incandescent lights, claiming that the higher temperature obtained increased the skin reaction. As in natural heliotherapy, pigmentation is deemed a favorable sign. Seventy-five amperes are mentioned as a suitable strength of current. With the winter months upon us, and at a time, too, when tuberculosis of all kinds, unfortunately, is rife, it might be well for this form of treatment to be tried here more than is at present the case. Little more than a year ago, indeed, the number of therapeutic mercury-quartz lamps in this country could be counted on one's fingers.—The London Lancet.

Intravenous Injection of Soluble Salts of Quinine and Cinchonine.—Rogers (British Medical Journal), conducted a series of experiments to determine the suitability of some of these salts for intravenous injection in man. He found that the dihydrochloride, urea, and hydrochloride and acid hydrobromide of cinchonine were highly soluble and had no immediate effect on blood serum in the strongest concentrations. The acid hydrobromide and bisulphate of quinine caused very slight precipitation in serum in 1:10 solution and none in 1:100. The remaining salts produced turbidity even in dilute solutions. None of the salts caused any increased tendency of the blood to clot and all of the more soluble ones were found to be relatively effective in destroying water paramecia, quinine acid hydrobromide and the dihydrochloride being the most active. Experiments on animals showed the soluble salts to be relatively nontoxic by intravenous injection. The dihydrochloride and the acid hydrobromide were also given to man in a few cases of malignant malaria and of the latter a safe dose was found to be from 0.6 to one gram in ten per cent. solution, while half as much of the former usually produced marked cinchonism. One or two cases are recorded in which the intravenous injection of quinine was immediately effective in preventing death from coma. It is suggest-
followed by the prolonged oral administration after the acute attack has been
ed that quinine be tried intravenously,
controlled.

A Method for Efficient Drainage of the Knee-Joint—Mayo-Robson (British Medical Journal). With the limb in the usual dorsal position, the deepest part of the synovial cavity is in front of the popliteal space, much below the level of the suprapatellar pouch. Drainage is at present practicallly always effected by inserting a tube or tubes into the pouch above the patella, leaving much of the septic contents of the joint behind and between the femur and tibia with a tendency to make a way for itself to the surface by burrowing backwards into the popliteal space or along the course of the tendons in that region, upwards into the thigh, and downwards into the leg, or in both directions.

By changing the position of the limb, it is possible to make a suprapatellar pouch the dependent part of the joint, when by the very simple operation of inserting a tube into the top of the pouch the whole joint can be completely evacuated and purified, and if this is done sufficiently early, a speedy recovery may be anticipated with the joints mobility unimpaired.

Two changes of position will make the suprapatellar pouch dependent:

(a) The vertical position of the limb at right angles to the body with the patient in the dorsal decubitus, or

(b) The prone position of the body with the foot of the bed well raised.

In both positions the limb must be efficiently fixed on a splint, as fixation in inflammation of the knee-joint is only second in importance to drainage.

When once the joint has been thoroughly evacuated of its septic contents, and if needful gently washed out with warm normal saline solution, the synoval membrane of the knee, like the peritoneum, is capable of taking care of itself. Long-continued drainage is very seldom required, and usually a movable joint will be obtained.

Enrichment Method in Examining Feces for Parasitism.—Carles and Barthelemy discuss the shortcomings of the different methods in vogue for detecting helminths, their encysted forms and ova in stools. They declare it is necessary to fluidify and homogenize the specimen of stool and bring it to the exact specific gravity most effectual for centrifuging out the parasites and their ova. They get rid of the coarser elements by passing the material through a wire sieve and a silk sieve (Hall). They take 20 gm. of feces to begin with, and dilute with physiologic salt solution containing 10 per cent. formol. The silk sieve has 90 threads to the centimeter (No. 90), except when seeking for ova; these require No. 32. The sieved fluid is then distributed in the centrifuge vials and centrifuged at 1,800 turns for one minute. The supernatant fluid is decanted and the sediment treated with a mixture of 12 gm. citric acid and 2 gm. of a 40 per cent. solution of formol and 86 gm. of water. The specific gravity of this is 1,047. Then 1 or 2 c. c. of ether is added and the tube agitated briskly to detach the sediment. Centrifuge for thirty seconds at 1,800 revolutions. Stir up the zone separating the ether from the fluid, using the tip of a pipet closed in the flume. This is to restore any cysts that might have been carried up by the ether. Then centrifuge again for thirty seconds as before, and decant all but the sediment. By this technic there is nothing left in the sediment except the helminths, encysted forms of protozoa, ova, and a little other debris of high specific gravity. The specimen is then ready for the microscope and gives exceptionally clean and clear microphotographs as they illustrate by a few examples showing the lamblia and the encysted forms, with only a few vegetable cells, in one of the four microphotographs.—Jour. de Med. de Bordeaux.

War Edema.—Under the name Das Kriegsodem (war edema) great attention is being paid at present in the German medical journals to a peculiar disease which seems to have become widespread throughout Germany during the present year. The disease has broken out not only in numbers of the camps occupied by prisoners of war, but also in the large towns. Maase and Zondek (Berl. Klin. Woch., No. 36, 1917), give an account of the disease as they have seen it in Berlin. The first cases occurred in January, 1917; males above the age of 40 years have been almost exclusively the sufferers. No noteworthy premonitory symptoms were observed, but suddenly great edema developed, especially of the lower limbs. The face and scrotum were often affected also, and in a small number of instances ascites and hemothorax occurred. There were no cardiac symptoms, and the urine never contained any albumin. As soon as the patient was put to bed a very marked diuresis at once began, and the edema quickly disappeared. Remissions and recurrences were fairly common.

The composition of the edema fluid in these cases had been compared chemically with the fluid effusions in renal disease and obstructive conditions such as hepatic cirrhosis. The chief difference found was the high ammonia figures in the Kriegsodem, as contrasted with the two other conditions. The pulse rate was markedly slowed during the disease, and examination of the blood gave, as a rule, a red count of three to four millions. This condition of anemia it was thought might probably be ascribed to hydremia. The occurrence of diarrhoea was fairly common.

The authors, in agreement with others, consider the cause of the disease to be underfeedings, especially the diminished quantity of fat. They suggest that toxic products of albuminoid metabolism may cause damage of the endothelial lining of the blood vessels, and so lead to edema. The high residual nitrogen and ammonia values found in the blood, urine, and edema fluids were considered to be evidence in favor of this hypothesis. By giving three patients 100 grams of fat daily for a week the authors were able to cure the disease completely without rest in bed or any other remedial measure. Another factor suggested as of etiological influence is the amount of fluid ingested. Owing to the changed food conditions most of the sufferers had been taking a more watery diet than normally in the shape of soups, turnips, and so on. The regulation treatment of the condition consists of rest in bed until all swelling has disappeared, diminution of the daily fluid intake, and bettering as far as possible of the diet.

Schiff (Muench. Med. Woch., No. 22) states that the disease appeared in Vienna with great suddenness. He gives the usual pulse rate as from 42 to 56, and states that the amount of urine passed daily during the stage of recovery was commonly 3 to 4 litres. He suggests that this purely war disease has obvious similarities with beri-beri and other diseases depending on failure of vitamines. Numerous authors have described the same disease as it occurs in the camps of prisoners of war, pointing out clearly its cause and the means that may be taken to remedy it when there is the will to do so.—British Medical Journal.

Typhoid Fever and Diphtheria in Children.—In typhoid fever, the diagnosis in children is very often a matter of considerable difficulty. This is particularly the case in private practice, in which it is not always possible to rely with certainty upon the temperature chart being kept correctly. The swelling of the spleen is often late in occurring and not very definite, whilst the Widal test is not so clearly positive as in later years of life. It happens, therefore, that typhoid fever in children either escapes being diagnosed altogether or is only recognized at a late stage. It would be of very great advantage to be able to use a specific test which would at once determine the presence or absence of typhoid fever, especially in the case of a child when a diagnosis often remains doubtful in the presence of a prolonged febrile period which may quite possibly be due to tuberculosis. A test which would eliminate at once and with certainty typhoid fever, would be of very great value.

In diphtheria, diagnosis is, as a general rule, easy, doubtful cases being definitely made certain by bacteriological methods. There are, however, some cases in which uncertainty remains, such as a suspicious rhinittis, or when the culture from a swab contains crowds of other micro-organisms, especially B. Hoffmanni, which interfere with the recognition of the B. diphtheriae. It sometimes happens that a swab has been taken after antiseptic applications of one kind or another have been made to the throat, with the result that growth of the B. diphtheriae is inhibited. Under such circumstances, a specific reaction would be of very great value.

L. Jeanneret, of Lausanne, believes that such tests can be prepared from cultures of B. typhosus and of B. diphtheriae, by using the same technique as in the preparation of tuberculin. Sterile substances are obtained in that way in carbolized glycerine, each of which contains the specific toxin of these bacilli.

These solutions are used for intradermic injection, 0:10 cc. of various strengths —1-10, 1-100, 1-1000 being given in that those who have previously suffered from that disease, a specific reaction is obtained which, like that of tuberculin, shows itself as a maculo-papule or as a small button of induration. A like result is obtained in the case of diphtheria.

So far Jeaneret has found the reactions to be strictly specific. He has named these two extracts, typhin and dyphtherin, in analogy with their close congeners, tuberculin and luetin. The results obtained up to the present have been, he considers, of sufficient interest to warrant the preliminary short account, thus securing priority for his investigations, but definite conclusions can only be drawn up after a long series of trials. Reactions of this kind in infantile diseases, in which diagnosis is always necessarily a matter of some difficulty, have considerable value as a complement to the clinical examination as well as to labortory procedures.—Revue Med. de la Suisse Rom.

A Spirochete in the Urine in Trench Fever.—Capts. A. T. Nankivell and C. E. Sundell of the British Army note that under the term "trench fever" a large number of cases of fever have been observed that have certain features in common, more especially a peculiar temperature chart and slow pulse, together with severe and persistent pains in the bones of the legs. Although, with increasing experience, gathered from the study of a large number of cases, several types of trench fever have been recognized, one outstanding feature common to many cases is the frequency with which the fever and the symptoms relapse. After an initial fever of short duration, lasting two to four days, defervescence takes place, and after an interval of varying length in different patients a further rise of temperature, with a return of the bone-pains, occurs. In some cases but one relapse takes place, in others more than one, and occasionally the illness may in this way be prolonged for several weeks. The patient may be free from discomfort in the apyrexial periods, but the severe bone-pyrexia during the relapse is of quite short duration, the temperature returning to the normal within 24 hours of the rise. In these cases a very characteristic chart is obtained, as a single "spike" is seen at strikingly regular intervals, if the relapse occurs more than once. Such charts present a certain resemblance to the well-known charts of malaria, especially as cases may be seen where the relapse occurs with great regularity after a given number of days, varying, however, in different patients.

Prolonged observations have as yet failed to demonstrate any specific virus in the blood of these patients, although the work of McNee and his colleagues has shown that the infection is present in the blood and can be transmitted by inoculation of the blood. The fact that relapse is such a prominent clinical feature of the disease, and also the peculiar course of the fever, have suggested to many that the infective agents may possibly be of protozoal rather than of bacterial origin. Further, the tendency of trench fever to relapse presents analogies with certain spirochetal diseases, such as relapsing fever and Weil's disease; and in the latter malady spirochaetes can be detected in the urine at a certain period of the disease. Several observers have succeeded in obtaining evidence of the presence of spirochaetes in the urine of cases of trench fever, and Captains Nankivell and Sundell in their communication deal with this side of the problem. In Weil's disease the microscopic evidence of the presence of pathogenic spirochaetes can be controlled by experimental inoculation into animals. In the case of trench fever this method of control has so far not been possible, as the disease has not yet been successfully transmitted to animals by any inoculation of blood, urine, etc.

The demonstration of spirochaetes in the urine of cases of trench fever cannot, therefore, be regarded as proving that trench fever is of spirochaetal origin; but evidence of value in this direction would be obtained by proof that these spirochaetes are only found in cases of trench fever, and more especially at a certain stage of the fever.—The London Lancet.

Dakin's "Dichloramine-T" in the Treatment of the Wounds of War.—Sweet (British Med. Jour.), says that he has treated some 80 cases with "diclroamine-T" (toluine-para-sulpho-dichloramine); some have been old cases with foreign bodies lying in the bone, and suppuration did not stop until the foreign body was removed. Fresh cases, in which enough integument was left to permit it, have been treated with dichloramine once and immediately closed, and have healed by secondary intention; 16 cases, old and fresh, were cultured after treatment with "dichloramine-T" for varying periods, of which 11 gave no growth whatever; of the 5 in which a growth appeared, 4 were old cases of deep bone involvement; the only growth was the Staphylococcus aureus in 4 cases and in 1 case the pyocyaneus. The wound fills rapidly with granulation tissue of healthy color, which exhibits no tendency to become water-soaked and indolent; the skin edges grow in rapidly. The surgeons of the unit, with Dr. Sweet, are agreed that the wounds treated by "dichloramine-T" are in every way as satisfactory as they have seen under any method: The new "dichloramine-T" solution is made by dissolving the crystals of "dichloramine-T" in chlorinated ecucalyptol and then diluting this solution by the addition of chlorinated paraffin oil. It is best applied by an oil spray, an ordinary hard-rubber or all-glass atomizer being the most practical method. It is of great advantage in wound treatment, even if the final results are no better, because it saves the pain of wound dressing; it affects an appreciable saving of dressing material; the amount of solution is of small bulk; the number of wounds which a surgeon can dress in a given time is far greater than by any other method; the elimination of the Carrel tube simplifies the dressing and the problem of the transportation of the wounded. The elimination of the Carrel tube saves the time of the nurse for the periodic flushing.

Repair of the Crucial Ligaments.—Hey Groves, in The London Medical Lancet, makes a wide horseshoe incision over the joint, with its ends running up to the ends of the hamstrings and its lowest point below the tubercle of the tibia. By a saw cut beneath the tubercle and one vertical to it at its lower end the ligamentum patellae is freed and turrned up. The iliotibial band must not be cut in this opening of the joint. The joint is then flexed and the crucial ligaments brought into view. For the repair of the posterior ligament, which should be done first if both are torn, the inner end of the incision is prolonged until the tendon of the semitendinosus is exposed. This is then cut from its lower attachment and canals are drilled from within the joint, beginning at the sites of attachment of the two ends of the posterior crucial ligament, which have previously been cleaned of the old ligament. The upper canal passes upward and backward through the internal condyle of the femur, the lower downward and outward through the external tuberosity of the tibia. The tendon is then threaded through these canals and sutured to the tibial periosteum. For restoration of the anterior crucial ligament the same plan is followed, but a band of the fascia lata is made to take the place of the tendon used for the posterior ligament. The joint is closed by nailing the tubercle of the tibia in place and suturing the incisions with catgut. The knee is then kept on a back splint for about two weeks and when the skin incision has then healed it is removed from the splint for gentle massage and passive movements each day. After a month the splint is dropped and the patient allowed to get about on crutches.

Sterilization by Dakin's Solution and Secondary Hemorrhage.—Bashford, in The London Lancet, made simultaneous parallel tests of the antiseptic power, the lethal action, and the digestive property of Dakin's solution and a number of other antiseptics by immersing living tadpoles in solutions of the antiseptics of varying concentration. Dakin's solution and eusol were found to be practically the same in their antiseptic powers and their lethal effects, though eusol was far less potent in digesting the tissues than was Dakin's solution. Both sterilized the living tissues in about half the time required to kill the animals. Chloramine proved relatively less toxic to the animals than the two preceding, as compared with its antiseptic property. It sterilized the tissues in about one quarter of the time required to kill the tadpoles. Flavine, iodine, and mercuric chloride did not show this separation of the sterilizing and lethal actions, though iodine proved to be an efficient antiseptic for the sterilization of living tissues. Further experiments showed that the digestive action of Dakin's solution and eusol were far more marked on previously killed tissues than on those of the living animal and this corresponds with the clinical observations. It was concluded that secondary hemorrhage is not due to the erosion by digestion of normal vessels, but that it results from previous damage to the walls of the vessels with the subsequent erosion of the dead tissues. The great advantages of Dakin's solution would seem to lie in its effectiveness in sterilizing wounds and its property of promptly cleaning up the wounds by the rapid digestion of all dead tissues. Secondary hemorrhage need not be feared from uninjured exposed vessels.

Cholera—Bennett (Indian Medical Gazette), recommends as the theoretically correct line of treatment, which has proved markedly efficient in a number of cases during a severe epidemic, the free use of castor oil. The purposes of the treatment are: 1, to remove the cholera vibrio and its toxins from the bowel; 2, until this is done to protect the mucous membrane from its irritating action; 3, to pass substances through the bowel to limit or prevent the growth of the vizrio, or to disintegrate its toxins. The great obstacle to efficient treatment is the difficulty of getting anything into the bowel, as the stomach is so irritable. The doctor administers two ounces of castor oil at once. In some early cases this is retained and soothes the irritability of the stomach; if it is rejected he chloroforms the patient, washes out his stomach, and introduces the drug. Permanganate can be mixed with the castor oil at the time it is given; it becomes somewhat discolored but seems to be efficient. Betanapthol or salol can be used in the same way. After this first dose an ounce of castor oil is given every hour or two.

Treatment of Trench Feet by Passive Hyperemia.—Turner, in The London Lancet, says that the treatment of this condition should include thorough cleansing and the prevention of secondary infection as well as measures for the relief of the original and primary inflammatory process produced by the cold. The plan followed by the author, which has given the best of results, is first to clean the feet with ordinary soap and water, clean and cut the nails, and then to paint the skin with a one per cent. solution of picric acid in methylated spirit. This latter application is repeated daily at first, and later every other day. The feet are then wrapped in sterile gauze and left exposed to the air until they are more comfortable when covered by the bedclothes. The inflammatory process is treated by Bier's passive hyperemia which is begun as soon as the cleansing is completed. The venous return is cut off by an elastic bandage applied just above the knee. This is left on for eighteen hours the first day, removed and reapplied after an interval of six hours. Thereafter the constricting bandage is applied for twenty-two out of each twenty-four hours. The treatment should be painless and a complaint of pain demands the removal of the bandage. The treatment usually relieves the pain in a few days and the blisters dry up and desquamate. Gangrenous parts also dry rapidly and separate, and the amount of tissue lost is strikingly less than would be supposed by the apparent extent of the signs of gangrene. As soon as the pain is gone the patients are allowed to walk a little in soft shoes, the hyperemia being continued when they are not walking.

Acetonemia in Children.—Guidi comments on the difficulty at times of distinguishing between acute appendicitis and an attack of periodical vomiting with acetonemia. Palpation of the appendix region through the rectum is sometimes the only means to clear up the case. He advises in case of persisting doubt to remove the appendix. There is always a possibility that the two affections may be associated. Three cases are described in detail in which the profuse elimination of acetone by the breath and kidneys was accompanied by frequent vomiting and occasional severe diffuse pains in the abdomen, the pulse fast and small, and the children were restless and felt badly, and there was no stool. The abdomen was distended, but this was uniform, and no specially tender points could be found. While the surgeon was studying the first case with the internist, all the symptoms suddenly subsided. No purgatives had been given, but slight peristaltic movements were detected while the abdominal walls were not contracted. The acetonemia subsided under large doses of sodium bicarbonate by mouth or rectum. There was no movement of the bowel untill the fifth day, but by the end of the week the child seemed to be perfectly well again. This child and the second were under 3, and the other was 6. This was the first attack of acetonemia in the last two cases; the first child had had at 18 months a similar attack of vomiting with abdominal symptoms. The intestines in the three cases seemed much dilated—evidently a paresis from the toxines in the blood. Guidi has encountered other cases of acetonemia in which there was paresis of the bladder and retention of urine, compelling catheterization, but these disturbances are always transient and disappear with the acetonemia.—Rivista di Clinica Pediatrica, Florence.

Effects of Nerve Ischemia in Wounds of Arteries.—Desplats, Buquet, and Pozzi (Presse Medical), have been led to recognize, as a possible result of traumatic obliteration of the main artery to a limb, the appearance in the ischemic region of nervous disturbances soon after the injury, these disturbances being due to the lack of circulation and progressing until the blood supply has nearly or quite returned to normal. In five cases following ligation of a wounded axillary artery, three types of nervous disturbance were noticed: 1. Paralysis of the terminal type, with reaction of degeneration. In all these cases the terminal portions of the ulnar and median nerves were paralyzed, causing paralysis and atrophy of the muscles of the hand; the radial distribution was also peripherally involved. In three cases the musculocutaneous nerve and biceps muscle were likewise affected. In three cases, too, the ulnar and median neuritis extended up to the forearm, being, however, less marked above than lower down. 2. Anesthesia of the hand, most marked at the finger tips and diminishing proximally. 3. Fusiform deformity of the fingers, evidently of trophic origin. In cases with a less persistent or less complete ischemia, milder nerve disturbances were noted. These included trophic, sensory, and motor abnormalities, more common in the upper than in the lower extremity, and slight atrophy of the limb, partly masked by edema, the latter most pronounced peripherally. The sensory disturbances were terminal and relatively slight, but the motor phenomena were more pronounced than the atrophy might have sugested, amounting sometimes to complete paralysis. The nerves showed loss of direct irritability but not of conductivity. The pathogenesis of these ischemic nerve manifestations is apparently very similar to that generally accepted in the case of the cerebral cortex and to that recognized by ophthalmologists in the case of the optic nerve from thrombosis or embolism of the central retinal artery. They recall the experimental observations of Lapinski to the effect that, upon aseptic ligation of the main artery to the posterior extremity, the various stages of degeneration of nerves in their peripheral portions follow, through parenchymatous neuritis.

Synesthesalgic Disturbances in Causalgia Following Traumatism.—Tinel (Presse Medicale), observed in one-half the cases of causalgia seen by him the presence of an area of the wounded arm in which deep pinching of the skin brought on an attack of pain in the corresponding hand. The area was at all times the same in a given subject but varied in location in different individuals. In causalgia of the median nerve, the field of synesthesalgic provocation was frequently at the outer border of the arm; in that of the ulnar, at the inner border, and in that of the brachial plexus, over the entire upper extremity except on the inner aspect of the arm. At times the area extended over the whole body, the phenomenon being more marked, however, on the side of the injured arm. As the causalgic manifestations recurred, the synesthesalgic area became reduced in size to scattered patches. That the synesthesalgia is of sympathetic origin is considered proved by the presence of vasomotor and secretory disturbances in situations other than the seat of pain and by the observation in one case of a dilated pupil on the side of the injury during an attack of causalgia. The starting point of the entire causalgic complex is not always in the nerve wound itself, for section of the nerve above the level of the wound does not always completely relieve the causalgic disturbances. The probable existence of collateral sympathetic pathways coursing through the arterial or even the venous sheaths and joined by anastomoses at various levels must therefore be recognized.

Nephritis Treated by Double Decapsulation of the Kidneys.—Burns (Edin. Med. Jour.), describes a case in a girl aged 6 years, who was admitted to hospital on account of "swelling of the body and eyes." The indications for operation are: (1) Persistent dropsy; (2) uremia; (3) exessive albumin; (4) suppression or persistent and notable diminution of the amount of urine voided. The type of ases are acute nephritis or chronic nephritis with acute exacerbations. The best results appear to occur in chronic parenchymatous nephritis in which there is marked anasarca. In this particular case operation was justified on the following points: (1) Failure of a long course of medical treatment; (2) marked dropsy; (3) high amount of albumin; (4) diminution in the urine voided; (5) age of the patient. Operation is contraindicated in (1) cardio-vascular disease; (2) patients over 50 years of age. The results of the operation on the girl are in keeping with those found in general in such operations: (1) Disappearance of dropsy; (2) increased secretion of urine; (3) great diminution in albumin. After operation there is transient anuria; then in about ten to fourteen days polyuria sets in. In about a month there are decided signs of improvement, which improvement is gradual. Whether permanent cure is established is doubtful, but there is great amelioration of the symptoms. The anesthetic employed should be ether.—The British Journal of Diseases of Children.

In the British Medical Journal October 20th, 1917, Dr. Carver, M. R. C. P., London, emphasizes the necessity of specifying a reliable brand of Thyroids and Thyroid Tablets. He called attention to the way in which some manufacturers label their preparations.

If the doctor will demand Armour's he will know that his patient gets a specific quantity of Thyroid tissues because we standardize our Desiccated Thyroids and Thyroid Tablets.

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Whenever a preparation of any of the endocrine glands is required, the physician should specify Armour's and see that his patient gets Armour's.

The doctor prescribes a preparation for a certain purpose and he can expect results only from first class products.

Heart Failure and Pregnancy.—Mackenzie, in The London Medical Lancet, points out that heart failure is essentially a question of myocardial efficiency. The doctor describes the force possessed by the heart as of two kinds, a force which maintains the circulation when the body is at rest—the rest force; and a force called into play when effort is made—the reserve force. Heart failure begins by the diminution of the reserve force, and is made manifest by a limitation of the power of the heart to respond to effort. All failing hearts show a limitation of the field of cardiac response—the first sign being the patient's consciousness that certain efforts which he used to make with ease now give rise to distress. But healthy hearts may show these signs when there is the added burden of pregnancy, for the condition then resembles an individual undertaking an effort with an impaired heart. Many healthy hearts burdened by pregnancy show distinct signs of inefficiency, and yet there is no danger. The notion that the left ventricle hypertrophies to meet the burden of pregnancy is not based upon trustworthy evidence. What does happen in every healthy woman is a limitation of the heart's power to respond to effort—a diminution of the reserve force, greater in some cases than in others. A careful investigation which Mackenzie carried out in 100 women before pregnancy, during pregnancy, during confinement and the puerperium, showed no evidence of that hypertrophy which is supposed to meet the increased demands, for the increased demands were only met by calling upon the reserve force. As the growth of the abdominal tumor proceeded the diaphragm was pushed up, the sides of the chest widened, and the heart was displaced upward and to the left, so that the apex beat was frequently felt in the fourth interspace outside the nipple line. With the emptying of the uterus the heart's position shifted to the normal position. while the exhaustion of the reserve force gives rise to the same symptoms whether it is a healthy heart over-burdened or a heart failing from disease, it is the extent to which the signs of cardiac inefficiency go and the progress of the failure which serve as a guide. The most striking phenomena of the progress of heart failure are the onset of dropsy, breathlessness gradually increasing till the patient has to sit up, edema of the lungs, and persistent increase of rate or violent beating of the heart on exertion. In regard to dropsy there is this to be remembered, that it frequently occurs in pregnancy from other causes than heart failure—in kidney affections and from pressure of the uterus upon the abdominal veins. When it is present it must not of itself be taken as an indication of a failing heart, but only when there are present the other symptoms of heart failure. It is unnecessary to insist upon orthopnea. When this stage is reached in heart failure the sooner premature labor is induced the better. Edema of the lungs is probably the most reliable guide. When carrying out his investigations it was his custom to begin the examination of the patient by finding out on which side she lay, and then get her to sit up, and auscultate the base of the lung on that side. In many healthy women he found during the later stages of pregnancy that the first deep inspiration was accompanied by numerous crepitations, and that the inspiration dispelled them, so that they were not heard after. In cases that did badly these crepitations did not disappear, but tended to persist, so that their continual presence, coupled with an impaired percussion note, is such a grave sign as to indicate the need for terminating the pregnancy. Termination of the pregnancy is indicated in mitral stenosis when edema of the lungs persists in spite of sitting up in bed or when the heart-rate is persistently over 100 with violent palpitation on the slightest effort. The dangers in aortic regurgitation are so great and yet so difficult to anticipate that he would recommend the termination of pregnancy in all cases when the woman has a "Corigan" pulse, and wehn there is a distinct forcible apex-beat outside the nipple line.

Direct Transfusion of Blood.—Hull (British Medical Journal), finds that while the advantages of direct transfusion are so apparent, this treatment does not appear to be in such frequent use as it merits. Apart from its obvious indications in cases of severe hemorrhage, it would appear to be a valuable treatment for severe sepsis and shock. How far the alteration of the blood in cases of shock determines the result is at present uncertain, but the effect of healthy blood upon the tissues of such patients appears to be worthy of consideration. Transfusion seems to be a more scientific remedy than the empirical injections of antiseptics into the blood stream. The difficulty of obtaining some one willing to submit to an operation entailng ligature of an artery he considers the only bar to a much greater use of this treatment. The operation is simple and can be performed without the use of special apparatus. To produce the best results the transfusion of blood must be direct from artery to vein, as in this way can clotting be prevented with certainty. The only disadvantage of this method is that the amount of blood transfused cannot be measured, but this is outweighed by the safety and simplicity of the method, and moreover the amount of blood which flows before the donor becomes faint is fairly constant. In preparing for the operation the left hand of donor grasps the arm of the patient just above the elbow, bringing the donor's radial artery in close proximity to the patient's median basilic vein. Then an incision about 2 inches in length is made in the patient's arm over the median basilic vein. A similar incision is made over the radial artery of the donor. The artery is cleaned for about an inch, and the lower end of the artery in the wound is clipped, digital pressure is made over the brachial artery, and the radial is cut above the clip. The end of the radial artery is pulled out of the wound, and a traction suture is tied through the wall of the artery. Two probes about an inch apart are passed under the vein for hemostatic purposes. A small cut is made into the vein (3 mm. in length) ; through this the needle bearing the traction ligature from the radial artery is passed. The needle emerges from the vein an inch above the incision. A second suture is now passed through the wound in the vein ; this suture is used to close the vein when the artery has been inserted. By drawing the traction suture the artery is drawn into the vein, the vein suture is tied, and the probes and digital pressure removed. The blood is allowed to flow until the donor feels faint. The artery is then clipped, pulled out and ligatured. The whole procedure is carried out under local analgesia. There is no serious mutilation of the donor by this method, and the elasticity of the artery makes it an efficient cannula, while a considerable length of vessel becomes available through a comparatively small wound.

Open Flap Method of Treating Perforating Brain Wounds.—Hunt (London Medical Lancet), advocates this method as giving more satisfactory results than any other. It consists in first turning back a good sized flap of scalp and perichondrium so as to expose the wounded area freely. The wound in the bone is then enlarged and all loose or depressed fragments are removed. The dura is disturbed as little as possible and foreign bodies are sought for only when shown by X-rays to be superficial. If the brain is much damaged and the wound in the dura small this is enlarged by radial incisions which extend to the bony margins of the opening. A strip of iodoform gauze is then inserted all around between the dura and the edges of the bony opening to stimulate the formation of defensive adhesions. A loose layer of iodoform gauze is laid over the whole bared area and the flap either loosely replaced or held retracted from the wound. Outer dressings of plain gauze wet with saline or boric acid are applied. These are changed twice daily but the iodoform gauze is not disturbed for about a week. Then a cerebral hernia will be found to have developed and often fragments of bone will be found to have been expelled. The deep dressing is replaced and changed twice a week. By the end of the second week the hernia will have reached its maximum size and will begin to recede. It will no longer project above the bony margins of the wound by the end of the fourth to sixth weeks and then the skin flap may be replaced and sutured down to the healthy granulations which cover the old hernia.

Tachyphylaxis.—Busquet (Presse Medicale), refers to the observation by various investigators, a number of years ago, that an intravenous injection of peptone in the dog, causing loss of coagulability of the blood, immunized against a subsequent similar effect upon reinjection after coagulability has reappeared. In 1897 Gley and Le Bas showed that a dose of propeptone in itself too small to cause incoagulability, immunized within a few minutes after the first injection against subsequent production of incoagulability by a second, much larger dose. This form of rapid immunization was termed tachyphylaxis in 1911 by Champy and Gley. Various observers have found that various substances other than peptone, including various organ extracts, definite explanation of the latter is not yet available, the conclusion is justified that the chief cause of the toxicity of organ extracts is their coagulant action, tending toward embolus production. Tachyphylaxis thus consists essentially in a rapidly induced incoagulability of the blood which obviates subsequent toxicity. Various drugs administered in man have already been found subject to tachyphylaxis, viz., arsenobenzol, peptone, sodium nucleinate, and chaulmoogra oil. Danysz found that while 0.2 gram of monosodium arsenobenzol injected in a rabbit caused convulsions and death in a few seconds, preliminary injection of 0.03 gram protected it completely from 0.25 given a few hours later. Busquet has noted that a prelimniary injection in a dog of one-tenth milligram of sodium nucleinate per kilogram of animal sufficed to protect from the hypotensor action—ascribed to coronary embolism or some similar interference—of an injection of five to ten milligrams given immediately after, whereas in the absence of the prelimniary injection two milligrams caused a marked and prolonged hypotensor effect. Clinical application of this principle has already been made in relation to the several drugs mentioned. Recent experiments by Busquet with an emulsion of Kephir which contains microorganisms, showed that the same rapid immunization to a fall of blood pressure can be induced in the case of certain dead bacterial cultures. He suggests that the principle of tachyphylaxis be applied clinically in the intravenous administration of organ extracts.

Tetanus and Exposure of the Feet to Cold.—Vincent (Bulletin de l'Academie de Medicine), lays stress on exposure of the feet or frostbite as a cause of tetanus. Even prophylactic serum therapy has not proved successful in completely eradicating such cases from military practice. Seventeen patients who had received three antitetanic injections in ten to twelve days succumbed to this condition, most of them from a hyperacute type of tetanus. Exposure of the feet seems to be an exceptionally effectual factor both in favoring multiplication of the tetanus bacillus and in antagonizing protection by antitetanic serum. Experiments performed by the author some years ago on guineapigs showed that it is especially localized exposure to moist cold which favors tetanus, and not an exposure of the whole body. Immersion and maceration of one posterior limb of a guineapig for two hours, the body and other posterior limb of the animal being kept warm in cotton, resulted in acute tetanus upon injection of tetanus spores. In the trenches, in winter, the inoculation seemingly takes place through pre-existing erosions or excoriations, or through ulcers due to actual frostbite. Below 15 deg. C. phagocytosis of tetanus spores is inhibited, and the edematous fluid infiltrating the foot and leg forms an excellent nutritive medium for the anaerobic organism. In this fluid tetanus toxin accumulates, and the subsequent absorption of the edema is equivalent to an injection of tetanus toxin; whence the acuity of the symptoms and the possibility of their persistence beyond the period of passive immunity due to serum injections. The local circulatory stasis hinders penetration of the serum into the infected tissues. Prophylaxis should include a trial of watertight leggings, to prevent the entrance of water which tightens up the leg coverings and thus further promotes edema. Broad, well oiled shoes, woolen socks impregnated with some fatty material, and occasional loosening of the puttees for a few hours at least, are all important precautions. When the first twinges of pain indicating incipient frostbite are felt, the subject should betake himself to a heated sap, wash and rub his feet with alcohol, and don freshly greased socks and shoes.

Quinine and Galyl in Subtertian Malaria.—Falconer and Anderson, in The London Lancet, cal lattention to the previous somewhat fruitful use of salvarsan and neosalvarsan in the treatment of malaria and record the treatment of six cases of malignant cerebral subtertian malaria with a combination of quinine and intravenous injections of galyl. In all of the cases the administration of quinine alone, either by mouth or intravenously had failed to check the disease, while the addition of galyl promptly rid the body of the parasites and cured all of the patients but one who died of a complicating pneumonia. The use of galyl alone in other cases did not destroy the parasites. In one patient the condition was benefited by the combined treatment but his blood was not wholly rid of the crescents. The treatment seemed promising in the few cases in which it had been used and seemed to have the advantage of being free from danger. The dose of galyl usually used was 0.4 gram.

The Cure of Inguinal Hernia.—Hull (British Medical Journal), describes a technique applicable to certain cases of oblique inguinal hernia, although he himself uses it much more generally. Local anesthesia possesses great advantages over general anesthesia for hernia operations. A half-per-cent solution of novocaine, to which a small quantity of adrenalin is added, is used. The needle of the analgesia syringe is entered at a point midway between the anterior superior iliac spine and the spine of the pubes half an inch above Poupart's ligament. The whole anesthesia is conducted through this puncture without withdrawing the needle. An incision from half an inch to an inch in length is made over the needle puncture and carried down to the aponeurosis of the external oblique. The fibers of the external oblique are split for a distance of half an inch. The opening in the external oblique should lie directly over the spermatic cord. The cremasteric and spermatic fascial coverings of the cord are drawn through the aperture of the external oblique. The cremasteric fibers are separated and the spermatic fascia incised; the sac is then found lying inside these coverings. Two pairs of fine hemostatic forceps (Halstead's mosquito forceps) are placed upon the edge of the sac, and an incision, half an inch in extent, made between them by a snip of a pair of scissors. The two layers of the sac forming the lips of the aperture are now clipped with hemostatic forceps. The aperture can now be held open by four pairs of forceps, and four incisions are made, one between each pair of forceps, enlarging the aperture sufficiently to display the interior. If omentum lies in the sac it is drawn out, ligatured, and cut off. The interior of the sac presents for examination two apertures, one the internal ring passing into the abdomen, the other passing down the inguinal canal. These apertures are separated from one another by a process of peritoneum, the "crista;" in a well-marked case the apertures resemble the muzzle of a double-barrel shotgun.

The process of peritoneum called the crista corresponds to the internal margin of the internal ring. Forceps are clipped onto the crista in one or two places. It is now necessary to separate the important tube of peritoneum leading into the abdomen (the neck of the sac) from the unimportant tube leading down the inguinal canal. This is done by cutting along the crista to the mesial side of the forceps, and dividing one layer of peritoneum with scissors. As the result of this incision the neck of the sac now lies clear, held by the forceps on the crista on its mesial side, and the forceps on the outer side of the sac. The neck of the sac has in this way been completely exposed and freed without dissection. A gauze swab is gently passed down the outer and inner side of the sac. A gentle pull is made upon the neck of the sac whilst it is ligatured as high up as possible. It will be remembered that the crista corresponds to the internal ring, and by separating the crista forming the neck of the sac in the manner described above, and pulling upon the sac, it has become possible to ligature the peritoneum, forming the neck of the sac, about two inches above the internal ring. It is unnecessary and undesirable to perform any displacing maneuver to the neck of the sac. When the sac is cut off distal to the ligature, the elasticity of the peritoneum will displace the ligatured sac well behind the rectus muscle. In 90 per cent. of cases this is all that it is necessary to do, and the skin incision is sutured with silkworm-gut passing down to, and taking up the edge of, the external oblique. In cases in which a large internal ring or very thin peritoneum renders a recurrence more possible, the conjoined tendon is drawn over the cord and sutured to Poupart's ligament without enlarging the wound. In exceptional cases it may be considered desirable for similar reasons to convert the operation into a typical Bassini operation. This can be done with ease by enlarging the split in the external oblique for another inch or more, lifting the cord, and suturing the conjoined tendon of the internal oblique and transversalis beneath it to Poupart's ligament. Experience has shown that when a recurrence takes place it is usually an immediate recurrence. The recurrence occurring immediately when the patient gets up is due to faulty ligature of the neck of the sac. The elastic peritoneum, released after ligature of the aperture, is very liable to slip the ligature. This cannot occur if the aperture formed by the neck of the sac is sewn in addition to simply tying the ligature.

The majority of herniae occurring in men of military age are small bubonocles or congenital herniae containing omentum.

This operation is of particular value when dealing with cases of recurrent hernia. The new operation is performed above the matted scar tissue of the old operation and completed by Bassini's method almost with as much ease as a primary operation.

Treatment of Wounds Infected With Bacillus Pyocyaneus.—Turner and Richardson (British Medical Journal), thus describe the characters of the infected wound and the condition of the patient:

The suppuration is profuse, and it has a characteristic bluish-green color which varies considerably in shade, and which stains the dressings and also very often the patient's skin.

There is a characteristic offensive, musty odor.

When this infection appears it tends to extend to other wounds in the same ward, although careful precautions are taken.

When it has once appeared in a wound it is very difficult to eradicate, and the healing of the wound is often greatly impeded.

There may be an intractable diarrhea due to infection of the intestinal tract, presumably of septicemic origin, and in one case recently B. pyocyaneus has been isolated from the blood.

As a result of the prolonged suppuration there may be considerable weakness and anemia.

Owing to the above facts wounds infected with this organism have been in some hospitals isolated and treated in separate wards. The infection is not dangerous to life, and as a rule eventually the cases do well. Indeed it would appear in most cases that the wound must be granulating and showing signs of repair before the organism can grow sufficiently freely to produce the characteristic pus. Many cases in which routine bacteriological examination of pus shows B. pyocyaneus without clinical signs of infection have later quite suddenly discharged pus of characteristic color and odor. Hence the infection frequently appears in wounds that are regarded as doing well, but in which the local condition is favorable for the growth of the B. pyoyaneus.

They advise the following treatment: As soon as a wound is suspected to be infected a specimen of the pus is sent to the pathological laboratory for examination. If the clinical signs are definite, treatment by hot eusol fomentations is ommenced at once. In a doubtful case the result of the examination may be awaited.

The fomentations must be of sufficient thickness and size; they must be as hot as the patient can stand, and must be changed four-hourly. A 5-per-cent solution of eusol heated to boiling point is employed. The wringer should be of canvas or strong calico, since ordinary wringers of linen or flannel are rapidly destroyed.

When the wound is deep or sinus-like, or when a slight coloration persists, the wound may be syringed twice daily with eusol as hot as the patient can bear, or packs of eupad powder wrapped in gauze and moistened with hot eusol may be employed in addition to the fomentations. The latter is often very effective.

Frequently the odor and color will completely disappear in twenty-four hours or less, but the fomentations should always be continued for at least three or four days after the disappearance of the clinical signs.

When the fomentations are omitted, eusol or saline soaks may be used; but if there is a return of color and odor, treatment by fomentations must be resumed.

A bacteriological examination of the pus should be made every two or three days as a guide to treatment. Cases in which the clinical signs of the infection are absent but the organism is found on bacteriological examination are probably harmless, but it is wise in these case to continue the eusol fomentations for a long period.

A Hitherto Unrecognized Form of Pulmonary Syphilis.—Leredde (Paris Medical), from clinical and serological study of soldiers suffering from acute bronchitis, with or without pulmonary congestion, emphysema, or asthmatic symptoms, asserts that the most common of all the forms of lung syphilis has hitherto remained unrecognized. Among twenty cases reported, seven had a positive Wassermann reaction, ten more had undoubtedly syphilitic clinical stigmata, and the remaining three were probably syphilitic. Congenital syphilis is the form of syphilis referred to in all instances. All the patients were relatively young men, and in the majority the pulmonary disturbance dated back to childhood or adolescence. All had dyspnea on exertion and a few even at rest, in the absence of any cardiac or renal impairment and, as a rule, of stethoscopic physical signs in the lungs. They were subject, moreover, to repeated attacks of bronchitis and occasionally to lung congestion. Several, in spite of their relative youth, showed the anatomical and functional signs of pronounced emphysysema. In some, attacks of asthma were experienced, and in two the dyspnea was of a familial type. Accessory symptoms were severe headache, attacks of dizziness, and an acroasphyxic state of the hands. The pulmonary condition is ascribed by the author to a gradually progressive syphilitic sclerosis of lung tissue, extending to the bronchioles and smaller bronchi. The expectoration and general health are variable, but the temeprature is generally irregular. Such cases are predisposed to the ordinary bronchial infections and to tuberculosis. Modern laboratory methods, including study of the spinal fluid, should be utilized in their diagnosis, and in the treatment energetic antiluetic measures, especially arsenobenzol, should be applied.

Treatment of Osteoma by the X-Rays.—Chevrier and Bonniot (Presse Medicale), emphasize the fact that surgical treatment of an osteoma varies in its results according to the stage of the growth. Young osteomas show a central bony mass and a peripheral shell of varying thickness composed of young cells gradually undergoing osseous transformation. This process may occupy months or years, and the only means of ascertaining the precise condition of the growth is the use of the X-rays. An osteoma may be classed as young as long as its X-ray shadow is smaller than its clinical size. Any young osteoma taken out surgically without complete removal of its shell, the limits and thickness of which cannot be ascertained, will inevitably recur. Adult octeomas, which have stopped developing and have no such shell, yield an X-ray shadow equal to their clinical size and will not recur upon surgical removal. Artificial aging of osteomas by means of the X-rays was attempted by the authors in two cases, with unexpectedly good resutls. The osteomas involved the femur and second metatarsal, respectively, and both folowed wounds. Not only was the desired rapid aging of the growths secured, but the osteomas almost completely disappeared in both cases. Application of this new treatment is especially advocated in luxations of the elbow, both for the prophylaxis and curative treatment of the osteoma which not infrequently follows. All such luxations should be reduced under general anesthesia and then subjected to early prophylactic X-ray treatment. By this type of management all the troublesome elbow osteomas could probably be obviated.

Subconjunctival Injections.—Ridley, in The Edinburgh Medical Journal, under this topic discusses the injection of fluid deeply into the cellular tissue of the orbit, the idea being to get a local effect of the drug by introducing it into the neighborhood of the part affected. This is a reason based on theory rather than any demonstrable proof. Rather it would seem that such injections cure the disease by the physiological process of locally stimulating a reaction of the blood and tissue against the invading cause. As to technique the patient is directed to look down and in. The conjunctiva is seized close to the outer canthus and a straight needle is plunged backward close to the outer wall of the orbit. With a drop of cocaine previously instilled and a sharp needle there is no pain in the procedure itself, but almost immediately after a severe aching comes on and lasts for from twenty minutes to two or three hours. It is best relieved by the application of firm bandages over an elastic pad of cotton-wool. The author enumerates a few of the conditions to which this method of treatment is applicable, to wit: all cases of retinitis and choroiditis, due to attacks of micro-organisms; iridocylitis, keratitis, ulcers of cornea with hypopyon, and more chronic affections, such as retinitis pigmentosa, retrobulbar neuritis, optic atrophy, and corneal scars.

In his clinic subconjunctival injection was used as an adjunct to other treatment, and was administered at intervals of three or four days in acute cases, such as corneal ulcers with hypopyon; but only every week, fortnight, or even month in more chronic conditions, such as retinitis pigmentosa, where the treatment could be continued for years. Fifteen to twenty minims was a convenient dose, and a course of six injections was usually given, and then the patient had a rest for two or three weeks before beginning again. In the author's experience the most astonishing results had been seen in early central retinitis, where sometimes the patch at the macula had almost disappeared and the central vision recovered in a few weeks. Great improvement had been noted, too, in tubercular and syphilitic choroidoretinitis. Then results in retinitis pigmentosa had been very encouraging in at least checking the advance of the disease, while often a most marked improvement had taken place. In old patches of keratitis, corneal scars, and even in optic atrophy, some benefit had been produced; and, in fact, it was a common thing for patients to return begging to have another course, in spite of the pain occasioned, so convinced were they of the advantage resulting. The operation was so simple that it could be entrusted to an intelligent nurse who had seen it done once or twice. Of course there was a slight danger of injury to the globe, or the other orbital contents, in clumsy hands, or of formation of abscesses; but he had never seen anything of the kind happen, or, in fact, any mischief, in the thousands of times it had been practiced in his clinic. The only drawbacks were the pain, and occasionally considerable swelling and edema of the conjunctiva and lids. The latter soon subsided on application of cold compresses.

To sum up: In the author's opinion, subconjunctival injection was a very useful adjunct to other methods of treatment, and gave some hope in cases hitherto considered beyond help.

In commenting upon this paper Harries-Jones spoke warmly on the value of the treatment, stating that his favorite injection was 2-per-cent sodium chloride with 1:1000 cyanide of mercury, and that he regarded it as one of the best remedies used in ophthalmology.

Mr. Cridland was enthusiastic as to the beneficial results of the treatment, holding that it had helped in a number of cases in which nothing else seemed to be of the slightest avail.

Quinine Idiosyncrasy in Five Cases.—Sinton, in The Indian Medical Gazette, points out that MacGilchrist in his investigation of the cinchona derivatives found that the order of lethality of the cinchona alkaloids to guinea-pigs was (a) cinchonidine, (b) quinine, (c) cinchonine, and (d) quinidine, cinchonidine being the least lethal.

MacGilchrist also found that "as regards unpleasant by-effects of these alkaloids buzzing in the ears was most frequently associated with quinine and quinoidine; amblyopia with quinine and cinchonine; diarrhea with cinchonine if administered over a week, and nausea with quinoidine. Cinchonidine even in large doses caused no unpleasantness of any kind."

A number of the above points are brought out in the cases recorded below:

Case 1.—B. K., European, aged thirty years, suffering from malaria. On the first day of his illness he was seen with a temperature of 103 deg. F., and had taken quinine acid hydrochloride 10 grains two hours previously. Another dose of 10 grains was given the same night.

On the second day the morning temperature was 100.4 deg., and 10 more grains of quinine were given. A similar dose was taken in the afternoon, and in the evening his temperature was 102.4 deg. It was then noticed that his face was slightly swollen, but as there were a lot of sandflies about, it was thought that it might be due to their bites.

On the third day the temperature was normal, but as there was very marked edema of the face and eyelids and severe headache was complained of, the quinine was reduced to 10 grains daily and saline purgatives were given. The edema did not go down for several days.

In this case the idiosyncrasy took the form of a marked edema of the face and eyelids, although only 40 grains of quinine had been given in two days.

Case 2.—B. S., Dogra, aged twenty-eight years. When the regiment was paraded for prophylactic quinine on service this man objected to taking it as he said he always got a rash all over his body and very severe headache after taking quinine. Quinine sulphate 10 grains was, however, given in tablet form, and in about one hour's he returned to hospital complaining of great itching and had a very marked urticarial rash all over his body. This rash lasted for four or five hours and was accompanied by a very severe headache. The buzzing in his ears lasted two days.

Case 3.—A. S., Mohammedan, aged thirty-eight years. After a dose of 5 grains of quinine sulphate in solution this man developed severe vomiting and diarrhea in about half-an-hour, and a diffuse urticarial rash appeared all over his body after one hour. This rash lasted five or six hours. He complained of vertigo and severe headache and stated that similar symptoms had developed on previous occasions when he had taken quinine.

As he had a malarial infection cinchonidine sulphate 5 grains was given; it produced a similar result but not in so marked a degree. His fever disappeared under treatment with tincture of cinchona, iron, and arsenic.

Case 4.—D. S., Sikh, aged twenty-two years. After the administration of quinine sulphate 5 grains he had severe vomiting and diarrhea with profound prostration. An urticarial rash appeared all over his body and his eyes became very congested.

This case is of interest because cinchonidine sulphate in doses of 5 grains did not produce this effect.

Case 5.—H. B., Jat, aged nineteen years.

His history was that when given quinine as a prophylactic he had become semi-comatose and had severe vomiting and diarrhea.

Cinchonidine sulphate 5 grains was given in solution, and after fifteen minutes he was carried back to hospital in a collapsed condition. He was semi-comatose, his face and conjunctivæ were very congested, his pupils dilated, and his eyes turned up.

His skin was cold and clammy, his pulse imperceptible at the wrist, but heart-beats 80, and his temperature 95 deg. Vomiting and diarrhea were severe. An ounce of brandy was given and hot bottles applied. After about twenty minutes he became conscious and complained of chilliness and severe headache. In a few hours' time an urticarial rash appeared on his body. His urine contained no albumin or blood.

On the next day he had recovered except for headache and buzzing in the ears, which lasted several days.

This case was very similar in character to one described by Van Poole, except that in his case the pulse was rapid.

It is interesting to note that so small a dose of cinchonidine sulphate caused such a profound disturbance, although it is the least lethal of the cinchona alkaloids.

These last four cases seem to be typical of the toxic effects of quinine on a susceptible subject.

The Nutritive Value of Beer.—That the direct food value of beer counts for little is borne out by an interesting investigation carried out by J. S. Sharpe in the department of physiology, Glasgow University, the results of which are published in the August number of The Biochemical Journal. It cannot be denied that the alcohols, sugars, and dextrin have a certain value as sources of energy, but even if we reckon that the total nitrogen found is present as nutritive material still the amount is insignificant. But, as Mr. Sharpe shows, it is a mistake to assume that all the nitrogen present is in the form of protein. As a matter of fact, the protein nitrogen of the beers he analyzed varies from only 13.2 to 37 per cent. of the total nitrogen—that is to say, the protein content of beer varies from 0.038 to 0.185 per cent., quite insignificant figures. In regard to the further distribution of nitrogen in beer, the amino-acid nitrogen varies from 0.114 to 0.040 per cent., nitrogen in purins from 0.010 to 0.039 per cent., and amounts due to other substances as alkaloid and bases are quite negligible.

These results are of interest, especially in view of the report of the Committee of the Royal Society on the Food Supply of the United Knigdom, which stated that the nitrogen compounds of beer have been little studied. So incomplete is our knowledge of their nature that this committee did no more than assume that something between 50 and 100 per cent. of the nitrogen in beer is in the form of protein or amino-acids which are utilized in the body. The higher gravity beers, as might be expected, show a higher nitrogen value than the low gravity beers; but is not all this beside the point? Beer is consumed because it is to so many a pleasant and palatable beverage. The thirsty man pays no regard to the food value of beer; he looks upon it as a pleasant, refreshing drink, and he is right; and it is fallacious once and for all to justify its consumption on the cult of calories or "tissue formers."

There is, however, one point overlooked in regard to the role of beer in the dietary. It contains a material amount of diet deficiency substances of the order of vitamines, and investigations have shown that beer added to the dietary increased the assimilation of the non-nitrogenous foodstuffs, and particularly of fats, while alcohol in moderate amount increased protein absorption from nitrogenous foods. Then, again, beer has undoubtedly a condimental action and often makes the simple meal attractive, if it is only bread and cheese. Thus regarded, beer, instead of representing a waste of food materials from which it is made, may actually effect an economy in inducing in those whose custom it is to drink it a better appreciation of the food they consume. In the recent bitter controversy about the merits and demerits of beer this consideration should not be left out of the equation, in justice to beer-drinkers who are modest in their demands for the national beverage.—The London Medical Lancet.

Pay of Army Surgeons for the Civil War.—Our issue of November, 1861, quotes from a circular from the War Department, January, 1860, as follows: Assistant Surgeon, under five years' service $53.33 per month, rations $36, forage for horse $8, servant $12, clothing for servant $2.50, servant's rations $9. Total receivable $123.83. Over five years' service, $70 per month, other allowances same, total receivable $137.50. Total receivable over ten years' service, $173.50. Surgeon, under ten years' service, $80 per month, total amount for servant $47, aggregate receivable, including horse and servant, $187. Surgeon over ten years' service, $80, aggregate amount receivable $223. Allowance for forage and servants is paid only when they actually employ and keep in service the number of servants and horses charged for. In addition, both assistant and full surgeons are allowed an additional ration per day after the termination of every five years 'service. (Note: As we understand the terms, the actual receipts besides allowances for horse and servant were as follows: 1st five years, assistant surgeon, $1,072. 2nd five years without promotion, $1,704. 2nd five years with promotion to grade of surgeon, $1,824. 3rd five years, rank of surgeon, $2,256. 4th five years, rank of surgeon, $2,688. Considering the different value of the dollar in purchasing power, these salaries are not very different from the present).

In January, 1862, a bill was introduced providing for a Surgeon-General, ranking as Brigadier General, a Sanitary Inspector General ranking as Colonel, six Sanitary Inspectors ranking as Lt. Colonels, Surgeons of first class ranking as majors, 50 Surgeons of second class ranking as captains and not over 70 Assistant Surgeons ranking as 1st lieutenant, all as of cavalry. This was essentially the same a sthe system up to the present, except as to the numbers. Salaries are not mentioned but editorially, the bill is highly commended and they were therefore, apparently regarded as satisfactory.—Buffalo Medical Journal.

Persistent Coughs and Colds.

Colds that linger invariably owe their persistence to inability of the body to exert sufficient resistance to overcome germ activity. Recovery, in consequence, is always largely a question of raising the general vitality and increasing bodily resisting power. To accomplish this, no remedy at the command of the profession is so promptly effective as Gray's Glycerine Tonic Comp. Under the use of this dependable restorative and reconstructive, the appetite is increased, the digestion improved, the nutritional balance restored, and the vital resistance so raised that the body can control infectious processes, and establish a safe and satisfactory convalescence.

In the treatment of colds, therefore, "Gray's" can be relied upon to raise the defensive forces of the organism and fortify it against germ attack.

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The Charlotte Medical Journal

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FIBROID TUMORS OF THE UTERUS TREATED WITH RADIUM.*

By Howard A. Kelly, M. D., Baltimore, Md.

The radical surgical operation has been the accepted method of dealing with fibroid tumors of the uterus up to the present time. As a major operation, although a comparatively safe one in skilled hands, it brings certain risks in its train, such as embolism, delayed convalescence, postoperative suppurations, hematoma and infections of the stump, hernias and prolapsus of the vaginal vault—to say nothing of pneumonia. Moreover, it is a mutilating operation.

For nearly five years now, Dr. Curtis F. Burnam and I have been treating fibroid tumors with radium. We have found that this comparatively new, nonsurgical method of treatment will favorably affect practically every uncomplicated fibroid of whatever size. It will stop hemorrhages together with menses—the latter either temporarily or permanently; it will shrink the tumor or cause it to disappear. It has no mortality rate whatever per se.

During the period between March 23, 1913, and January 12, 1918, we have treated 211 cases of uterine fibroid with radium. During this same time 45 cases were operated on and not radiated, either because of some complicating condition or because operation was preferred.

As a preliminary to radiation we always exclude malignancy by a curettage and histological examination. Appendicitis and cholelithiasis, if they exist, will in all probability be indicated by the clinical history of the patient and if lateral inflammatory disease of the tubes and ovaries is present, a careful examination will betray it. In this way we make sure that we are dealing with an uncomplicated fibroid tumor of the uterus suitable for radium treatment.

In the group of 211 cases of uterine fibroids thus treated with radium, the average age on admittance was 43. The oldest patient was 67 and the youngest, a colored woman, was 26. In 161 cases the patients complained of menorrhagia, metrorrhagia or both; in 50, bleeding was not a symptom.

At the present time 87 are entirely cured of their tumors. That is to say, the tumors have either quite disappeared or have reduced to utterly insignificant size.

In 62 instances the tumors have diminished in size. It should be noted here that this group is not static, but is composed largely of recently treated cases (less than two years), where the radium has not had time to exert its full effect. The members of this group are therefore constantly augmenting the first group.

In 14 cases the patients are so well, that in spite of repeated requests that they go to their family physician for an examination and a report, they have failed so far to do so.

Two complicated cases are reported unimproved; 8 were operated on after radiation; 2 died of causes unconnected with the treatment; 12 have sent no report, 14 are too early for results, and 10 abandoned treatment.

If therefore we throw out the four last groups where the data are insufficient (38 cases), we have remaining 173 cases in which the results are known. In 163 of these radium alone has proved efficient.

The remaining ten will be considered somewhat in detail.

Two of these were reported unimproved by treatment. One was a huge tumor of 22 years growth which came within two finger breadths of the ribs on each side and completely choked the pelvis. As it was impossible to insert radium within the uterus, this patient was treated from the outside only. She was given but one treatment. Four months after, her husband reported her unimproved but gave no details. The second case was complicated with gall stones. The fibroid rose three-fourths of the way to the umbilicus. The patient was urged to have an operation but refused it and insisted on being treated with radium. She was finally given one intra-uterine radiation. Nine months after treatment her son reports "she has not improved as she should," but gives no further information.

Operation was performed after radiation in 8 cases. In 3 the fibroid condition proved to be complicated by ovarian cysts; in 2 bleeding was not controlled by a single radiation and the patients desiring it an operation was done, in each case a submucous myoma was found. In the remaining 3 there was insufficient reduction in the tumor mass. In one of these a calcified uterus was found, which suggests the value of X-ray to pre-determine such a condition in women over 40. In another, a huge tumor, radiation was carried out for several months and the size of the growth considerably reduced. As it persisted, however, in remaining as large as a grape fruit, it was thought best to operate. Pressure symptoms were present in the third case which made it doubtful in the beginning whether radium should be tried. This was done finally with some improvement. Later, the family physician reported that the tumore was increasing in size and an operation was carried out, only to find that the tumor had, on the contrary, decreased one-third during radiation.

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*Read before the recent meeting of the Tri-State Medical Association of the Carolinas and Virginia, Charleston, S. C., February 20, 1918.

To summarize these results, radium alone was sufficient to relieve the patient in 163 out of 173 cases. In six of the 10 cases remaining some complicating condition existed; in 2 cases the patients asked for operation, and in 2 cases the reduction of the tumor was not sufficiently rapid.

The technique of the treatment with radium is simplicity itself, as it consists merely of the application of 300 to 500 millecuries of the emanation, covered with a rubber cot, on the end of a uterine sound within the uterus for about 3 hours. It may be necessary to supplement this treatment with a similar one in a few months time, or with an external abdominal treatment then or later.

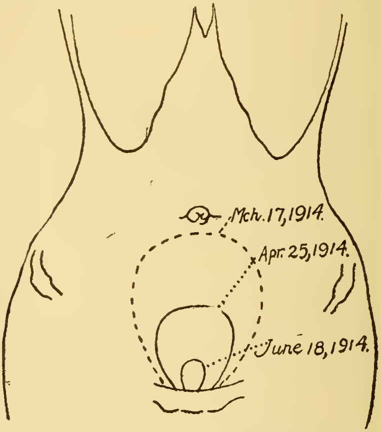
For external treatment one or more grams of radium are used suitably filtered. The package is placed on the abdomen and shifted over different areas during several hours, thus giving the skin a minimum radiation and the tumor a maximum radiation. In skilled hands, no irritation of the skin results.

The immediate effects of the treatment are sometimes nausea for about 24 hours and abdominal tenderness for several days. Some of the patients suffer from a leucorrheal discharge for a few weeks. There may be no menstrual period after the treatment, or there may be one or several before amenorrhoea is established. A second or even a third treatment may be required to bring this about. Menopausal symptoms for the most part are mild. In younger patients there may be a return of menstruation after a year or two; it is then scant or nearly normal. In some cases mild treatment is given with the purpose of controlling and not stopping menstruation altogether.

From the data given above we are clearly justified in concluding that **radium is the treatment of choice in uncomplicated fibroid tumors**, as it is both safe and effective. If in the exceptional case it proves ineffective, an operation can be resorted to with no increased difficulty on account of radiation.

Two typical cases are appended:

Case 1.—Miss B. S. (39 years). Admitted March 16, 1914.



Diagnosis: Uterine fibroid; menorrhagia.

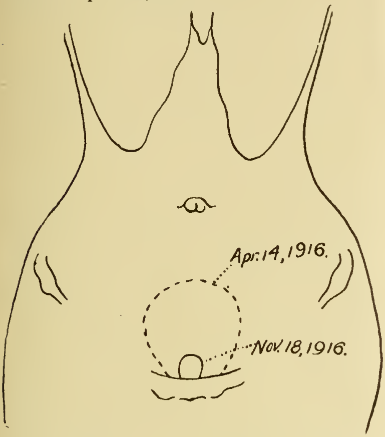
Examination: Uterus site of multinodular fibroid mass which reaches to 1 cm. of umbilicus. Growth is 15 cm. in longitudinal axis and approximately same in other axes. First noticed October, 1913.

Symptoms: The menstrual periods have been coming more frequently, lasting longer, and are more profuse.

Treatment: March 17, 1914, 300 mgs. radium element intra-uterine for 1½ hours. April 25, 1914, 1,371 mgs. radium element on abdomen for 2½ hours.

Results: Patient nauseated 24 hours from first application. Soreness in abdomen for 10 days. Temperature 99 3-5 for 8 hours after first application. Scant period for 5 days in April; scant period for 3 days in May; normal period for 3 days in June. April 25, 1914, examination showed uterus half original size. June 18, 1914, uterus normal, function of ovaries intact.

Case 2.—Miss S. E. H. (40 years). Admitted April 14, 1916.



Diagnosis: Uterine fibroid; slight increase in menstruation.

Symptoms: Menstrual periods used to last 4 to 5 days, now last 1 to 2 days longer. Nervous.

Examination: Fibroid reaches half way to umbilicus.

Treatment: April 15, 1916, 532 mgs. intra-uterine for 3 hours and 698 mgs. on abdomen for 3 hours.

Results: One free flow after radiation and one partial, none since. November 18, 1916, no tumor. July 16, 1917, in excellent health engaged in active work, no menopausal symptoms.

Chronic Cardiac Disease.

The patient with organic heart disease needs constant attention to his digestion and nutrition. A little falling off in the general vitality and the compensatory status of the heart may be lost forever. At the first sign of nutritional decline, therefore, Gray's Glycerine Tonic Comp. should be given. This dependable tonic braces a wavering organism by reinforcing weakened functions. Thus it not only directly contributes to cardiac power, but what is vastly more important, materially reduces the stress under which a feeble heart constantly has to labor. In other words, while increasing the carrying power of the heart, it also decreases the burden.

HYPERTROPHIC STENOSIS OF THE PYLORUS IN INFANCY.*

By W. P. McDowell, M. D., Norfolk, Va.

From a brief review of the literature we learn that "Pyloric Obstruction" has been recognized and described for a number of years. As early as 1788 we find one Hezekiah Beardsley writing on the subject, describing a case of "An infant who in the first week of life was attacked with a "puking"; the feces were in small quantity and of ash color." These symptoms continued with only slight variation until the time of his death, at the age of five years. Autopsy revealed an unusually large stomach and the pylorus was invested with a hard scirrhus mass. Among a number of writers there seems to exist some doubt as to this case being one of true hypertrophic stenosis, claiming that the credit for the first case should belong to Williams, who in 1841 reported "A case of scirrhus of the stomach, probably congenital." From the clinical descriptions and autopsy findings there seems to be no doubt but that Williams' case was one of the same type which we today recognize as congenital hypertrophy of the pylorus.

The writings and investigations of thee psioneers failed to arouse any great amount of interest in the subject, and the disease continued to be regarded as one of the rare anomalies of medicine until 1887, at which time Hirschsprung reported two cases and pointed out the frequency of its occurrence. To Hirschsprung belongs the credit of having described in detail the autopsy findings and pointing out especially that it is the circular fibers of the pylorus which are principally involved in the hyperplasia.

In 1896 Finkelstein wrote on the subject and called especial attention to the palpable tumor, which we today recognize as one of the characteristic features of this disease. During this same year Dr. J. Thompson, of Edinburg, published a report of the first cases recorded in England. That the condition is not so uncommon as was formerly supposed is proven by the large number of cases we now find recorded. Within the past decade this subject has been the topic for discussion and investigation by a number of American and European writers, and today we find more than a thousand cases recorded. While there has been much work and investigation directed to this subject, there still exists among the various writers quite a diversity of opinion concerning the pathology.

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*Read before the recent Norfolk Medical Society, Norfolk, Va.

A great many contend that the primary and essential lesion is dependent upon a true muscular spasm, and the hypertrophy, when present, is secondary to an over stimulated muscle. Others take the very opposite view and argue that the lesion is due to a true hyperplasia of the circular muscular fibers of the pylorus, of congenital origin and that the spasm is superadded, while not a few others claim that the two conditions, spasm and hypertrophy, may exist as separate and distinct pathological entities, each varying in degree of severity, with hypertrophy sometimes coming on as a complication of the spasm.

Among the more recent writers arguing for the congenital origin of the hyperplasia with a superadded spasm, should be mentioned Holt. In a very classical article on the subject, based on the study of 141 cases and published in a recent number of the Journal of the A. M. A. he states: "The clinical course and the uniform pathologic findings has convinced my colleagues as well as myself that a division of cases of pyloric stenosis of infants into spasmodic and hypertrophic types is not admissible—cases of true hypertrophic stenosis, however, differ much in degree; in very few is the obstruction complete, but hypertrophy, undoubtedly congenital, is the essential lesion in all, spasm being added as a secondary condition."

During the past year the writer has had the opportunity of observing, in private and hospital practice, quite a number of these cases, and from a careful study of them is convinced of the correctness of the theory advocating a congenital hyperplasia with muscular spasm as a secondary complication. Of the cases observed the ages ranged from two to eight weeks, and in all cases it was possible to demonstrate a palpable tumor. Most of the cases were followed to the operating or autopsy room, and from observation made there it was hard to conceive that the tough, hypertrophied bands could have resulted in such a short time from a muscular spasm. The pylorus was found invariably enlarged, presenting a tumor formation about the size of the first phalaynx of the little finger, of a tough, glistening, fiberous character, with the lumen just large enough to admit a small probe. The stomach is usually dilated, extending in some cases down to or below the navel, while the walls are much thickened, and the mucous membrane lining is thrown into folds. While all the tissue forming the walls show some evidence of hypertrophy, it is the circular muscular fibers forming the pyloric sphincter that are chiefly concerned. According to Holt, the hypertrophy, while being the primary and essential lesion does not alone produce sufficient narrowing to cause the obstruction, and not until the spasm is added do the symptoms begin.

If the hypertrophy is of congenital origin and the symptoms are dependent upon an intercurrent muscular spasm, the question naturally arises, what is it that excites the spasm? In answer to that question very little seems to be known, several theories have been advanced but up to the present time there has been no satisfactory explanation. It has been attributed to swallowing amniotic fluid; as an evidence of spasmophilia and to the hyperacidity or hypersecretion of the gastric juice. In this connection Engle reports a four weeks old baby with pyloric stenosis and a jejunal fistula. This infant was fed through the fistula, and by the aid of a tube passed through the oesophagus he obtained from 60 to 200 c. c. of gastric juice daily, the acidity of which was high and was nearly entirely made up of H. C. L. This was an abnormal secretion which he thought might have been the cause of the stenosis. Holt calls attention to the delicate construction and the highly sensitive nature of the stomach of these little patients, and offers the suggestion that just as disordered innervation of the intestines a few months later may excite intussuception, so now some trivial irritation of the stomach may be sufficient to excite spasm of the pylorus.

As a nevidence in support of the congenital origin of the condition Dent reports the case of a seven months fetus in which the pylorus was found hypertrophied.

Symptoms.—Pyloric stenosis is more frequent in males than females—the ratio being four to one. Why this difference, no explanation has been offered. It is claimed that the first born is more frequently affected than later born children, and it may affect more than one child in the same family. There is one instance in which both mother and child were similarly affected.

While this disease is most frequently

met with in infants from two to eight weeks of age, there are a few cases reported occurring as early as the first week of life. The onset is usually sudden, with no previous history of gastric disturbance, and the largest majority of the cases occurr in robust, breast fed infants, thus proving that the question of diet can not be considered as an etiological factor. Usually the first symptoms for which the mother seeks relief is that of vomiting, and as a rule she can state almost definitely the exact time of onset. This symptom is usually the most persistent and troublesome one with which we have to contend. At first the vomiting may occur only occasionally but it soon becomes habitual and protectile in type. Frequently the entire contents of the stomach may be shot out for a distance of several feet. In this respect it differs from the regurgitation which is so often seen in simple gastric indigestion.

The vomiting may occur soon after nursing, and quite often while the child is still at the breast. I have seen patients interrupted in the midst of a nursing with a violent attack of vomiting in which apparently the entire contents of the stomach would be forcibly ejected, and then they would resume nursing as if nothing had happened. At the onset the infant vomits no more than it takes, and this is often repeated, but as the disease becomes chronic and gastric retention is established they do not vomit so frequently but very often vomit more than they have taken at the last feeding. In the early stages of the disease the vomitus consists of food showing very little change, but later on there is a mixture of food and mucus of a highly acid or rancid odor. Owing to the persistent vomiting and the loss of fluid the urine is very scant.

Constipation is an early and persistent symptom, the bowels moving every third or fourth day, the dejecta presenting all the characteristics of starvation stools. They are usually small in amount, green or brownish in color and resemble very much the meconium stool of the first days of life.

On account of the persistent vomiting and the small amount of fluid retained the patient rapidly loses weight, and in a short time emaciation become marked. Dependent on the amount of vomiting and the degree of stenosis the loss of weight may vary from four to five ounces a week in mild cases, and from one to two ounce sa day in severe cases.

Gastric peristalsis is a most important diagnostic symptom, and once observed will rarely be mistaken for the intestinal peristalsis which is sometimes seen in other conditions. These peristaltic waves are quite characteristic, usually appearing at the margin of the ribs on the left side, as a ball like tumor they pass slowly across the abdomen to the right and disappear just beyond the median line near the navel. These waves follow each other in regular sequence, freqeuntly giving an hour glass appearance.

Peristalsis may not be observed at all times in all cases, in fact, they are never present when the stomach is empty. Allowing the child to nurse at the breast for a few minutes or by giving a few ounces of water or milk from the bottle is usually sufficient to excite the waves. In some cases it may be necessary to apply gentle stimulation to the epigastrum in order to excite the waves. This may be done by the application of a cold cloth or a small piece of ice, or by gently tapping the abdomen with the finger. Freqeuntly these wave sare followed by vomiting.

In a majority of the cases a distinct tumor can be felt, and while a palpable tumor is not essential for a positive diagnosis, its presence is considered pathognomonic. The tumor is usually felt midway between the navel and the free border of the ribs and a little to the right of the median line. In some cases considerable patience and perseverence is necessary in order to palpate the tumor, and it is essential that the child be quiet and the abdominal wall be relaxed.

The tumor varies in size from a large bean to that of a peanut, and when rolled under the finger feels hard and tense. Morse, Grulee, Holt and others have all reported cases in which the tumor could be demonstrated for several months, or even years after the symptoms had disappeared.

Another prominent symptom is that of gastric retention. This is not so marked in the early stages as it is after the disease has existed for several months. One case I have in mind in which the infant was fed six ounces of food by lavage, it was possible at the end of four hours to withdraw practically this entire amount.

Diagnosis.—The symptoms on which a diagnosis of this disease depends are vomiting, gastric peristalsis, palpable tumor and gastric retention.

While vomiting is a prominent symptom in quite a number of acute conditions of infancy, there are very few instances in which it is forcible and projectile. In most of the acute cerebral diseases, especially the various forms of meningitis, we frequently meet with the projectile type, but in the absence of other symptoms so characteristic of pyloric stenosis, there should be no trouble in differentiating the conditions. One of the most frequent diseases with which pyloric stenosis is confused is that of gastric indigestion of breast fed infants, and in a number of instances the infant has been taken off the breast, believing that the milk was not suitable for the child. Gastric indigestion, while occurring quite freqeuntly in the artifiicially fed, is an exceedingly rare condition in breast fed infants; and when it does occur it is never accompanied by gastric peristalsis or palpable tumor, and the character of the vomiting is entirely different.

Treatment.—The treatment of pyloric stenosis depends on the type of the disease with which we are dealing. Undoubtedly, there are cases in which the symptoms are mil dthat will respond to medical treatment, but the majority of cases require surgical intervention for a permanent cure. The medical treatment consists of careful feeding and stomach washing. Gastric lavage should be used once or twice daily in order that the mucus and fermented food may be removed. The water used for this purpose should be of a temperature of 110 deg. to 112 deg., in which a small amount of sodium bicarb or sodii chlor. has been dissolved. The water should be allowed to flow slowly into the stomach and then syphoned out. This may be accomplished by the use of a soft rubber catheter 24 F. to which a small glass funnel has been attached. In some cases it may be neccessary to use suction.

Breast milk is the food par-excellent in these cases, but it is usually necessary to even dilute the breast milk. Especially is this true if it is found to be high in fat, as it is well known that a high percentage of fat delays the emptying time of the stomach. If breast milk is not obtainable the next best food is a modification of cow's milk. This should be given in a formula low in fat or even fat free, and for this purpose we have no better substitute than whey. Whey is practically fat free with a rather high percentage of whey protein, easily digested, and with a sugar composition equal to that of milk. It is not coagulated by the rennen and is therefore easily passed through the stomach. With the whole milk protein it is advisable to add an alkali, either in the form of potass. cit., 2 gr. to the oz. or lime water in proportion of 50 per cent. of milk and cream. These alkalies are given with a two fold object: first to prevent the coagulation of the casein by the rennen, thereby preventing the formation of tough curds, and second, to neutralize the acid juice, thus overcoming a tendency of muscular spasm.

In reference to the quantity of food given at one time there is a difference of opinion. Some authorities prefer small quantities repeated at short intervals, while other sadvocate larger quantities at longer intervals. Personally, I believe this question is best decided on the merits of the individual case.

After the case has been treated medically for a week or ten days and no improvement is shown, and especially if the infant continues to lose weight, the only alternative is a resort to surgical treatment. One leading authority advises that in all cases in which a palpable tumor is present immediate surgical intervention is indicated.

For several years gastro-enterostomy has been the operation of choice, but the procedure was one filled with difficulty, and the mortality was high.

In 1913 Rammstedt, of Munster, devised a method of operating on these cases, which has revolutionized the treatment and reduced the mortality rate from 50 per cent. or 60 per cent. down to 24 per cent. This operation consists simply in serving the band of hypertrophied circular muscular fibers of the pylorus down to the submucosa, thereby allowing the lumen to dilate. The advantages of this procedure are many, first the entire time does not require more than fifteen or twenty minutes, the stomach is not opened, only the circular muscular fibers are severed, thus eliminating the risk of nonunion and peritonitis. Hemorrhage is seldom troublesome and no suturing is necessary. It is found that shock following this operation is much less and that food can be pushed much more rapid. While this operation, in the hands of a competent surgeon, is safe, yet the success of the operation is in no small measure dependent on the after treatment.

Feeding is usually begun as soon as the infant has recovered from the anaesthetics, and for this purpose diluted breast milk is indispensible. It should be given in small quantities, diluted 1-3 to 1-2 strength with water, and repeated at regular intervals. As the patient improves the quantity and strength of the milk should be increased, so that by the end of 24 hours the infant is getting whole breast milk. At first all milk should be given by means of a medicine dropper, and not until the end of a week or ten days should the infant be put to the breast.

It is my hope that these remarks may impress upon your mind the clinical picture of this condition, and that no case coming under your care may be overlooked.

THE TREATMENT OF PELLAGRA*

By E. H. Bowling, B.S., M. D., Durham, N. C.

As the cause of pellagra is unknown it furnishes a rich field for the medical nihilist. It is rather humiliating that because no one has found that there is a sovereign remedy for the complaint that a great many medical men fold their hands with the complacency that is the twin brother of ignorance and are satisfied to give their patients some form of arsenic or hypodermics of cacodylate of soda, or worse still to give some palatable placebo and patiently wait while the disease gnaws out the vitals of the patient.

Since the general acceptance of the theory of Goldberger that pellagra is caused by the ingestion of an unbalanced ration, the condition of the average patient is worse than before; for a great many medical men accepting the theory without thinking of the gastric condition of the patient jump to the conclusion that all that is necessary for the cure of the patient is to stuff his anatomy full of the proteids and presto change—the patient is well. It is hard to conceive of a more pitiable sight than to see one of these unfortunates in the last stages of the disease with a gastric irritation of such type that the stomach is not reacting scarcely any of the digestive ferments and certainly no hydrochloric acid, with the ropy saliva stringing down from the mouth sitting over a plate of beans and trying to devour—this to him—nauseous dose, being assured by his physician that if he will eat plenty of beans that the cure is certain, swift and sure.

I do not believe that pellagra is caused by an unbalanced ration and the experiments of Goldberger do not prove to my mind that this is the cause. While these experiments were brilliant and on the face conclusive, still we know that to take a lot of men in the most approved physical condition and put them on a semi-starvation diet for any length of time would so decrease their resisting power and would so lower the opsonic index that they would be subject to any disease, and if as soon as the disease appeared they were put back on a good wholesome diet before there occurred any trophic changes in the stomach that they would recoup all the ground they had lost, by nature's methods; would throw off the disease and regain their accustomed health; but to try to give the emaciated run down person this same food would be just a little short of criminal.

The cause of pellagra has never been definitely settled and in the present state of our knowledge one man's theory is worth as much as another's provided he has conscientiously studied the disease in any great number of cases and has gone at his work with his eyes open to see the different phenomena that are plainly evident and with his mind in a receptive mood.

Almost everything has been accused of being the cause, the more prominent of which might be mentioned the ingestion of ordinary maize, excessive use of sugar, the use of cotton seed oil as a food, the Buffalo gnat, the house fly, an unbalanced ration and even the lowly bed bug has been tried and convicted by circumstantial evidence.

While all of these theories have their staunch advocates and are championed by men who can wield a lusty blade, none of them with the possible exception of the unbalanced ration theory, as advanced by Goldberger has been generally accepted by the profession and this theory has not by any means been universally regarded as the cause.

Garrison of the Thompson McFadden Commission, while advancing no definite theory said that he was convinced that it was either an infectious or a contagious affection. With this theory I most heartily agree except I would limit it to an infectious malady.

There are a good many things about pellagra that we know, and a great many that are in realm of interrogation. For instance, we know that a person may develop the complaint with a normal or possible an abnormal amount of hydrochloric acid in the gastric secretions, but as the disease advances we see a progressive loss of the acid in the stomach until its final absence. I called attention to this fact some five years ago and it has been proven correct by a number of observers since that time and it has been found to be universally true. Here is one of our big question marks; why is it so? What causes this gradual loss of functions that stops the secretion of hydrochloric acid?

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*Read before the Tri-State Medical Association of the Carolinas and Virginia, Charleston, S. C., February 21, 1918.

Another big interrogation point is: Why is it from infancy to puberty as many males as females develop this disease, this same condition is also true from forty-five to old age, but from puberty to the menopause three females have the disease to one male. Could this condition of affairs be explained by any theory that has been advanced as to the causation of the malady? Do not females eat the same food and are not they subject to the same surroundings as the males with whom they live, then why should they be three times as subject to the disease and only woman of the child bearing period? Then again if we accept any theory except that it is caused by an amoeba, how can we account for its evident spread in families in communities in whole sections of the country?

From what has been said above it is evident that I believe that the disease is of amoebic origin. This theory is the fruitage of a careful study of more than four hundred cases, and every other theory had to be relegated to the discard when illumined by the glow of stubborn facts. No theory except this will account for the phenomena so plainly evidenced in a study of any great number of cases.

Pyorrhea alveolaris has been proven by Bass to be caused by an amoeba and the concurrence of pyorrhea with pellagra, while not universal is so common that it led some observers to believe that pyorrhea was really the cause of pellagra.

The observations carried out for the past eight years forces me to the belief that pellagra is caused by the ingestion of some form of amoebic life, not yet isolated into the stomach, here it multiplies and begets its kind, forms toxines or ptomaines which on being absorbed into the blood has a deleterious effect upon the thyroid gland and the symptoms that we recognize as pellagra is mostly thyroidsis. To those who have had experience with nervous break downs, hysteria, Cretmism, Myxodvmea and Graves' disease will recognize a marked similarity all along the line. These other diseases we know are caused by a diseased condition or abnormality in the secretion of the thyroid. Why not call a spade a spade and recognize the diseased conditions of the thyroid in pellagra? Does not this answer this question of why three females in child-bearing period have pellagra to one male? Is it not a fact that five females have goiter to one male at this identical age?

We learned in college that the colloid (glue like), material which is found within the thyroid vesicles and is believed to be their secretion finally ruptures through their walls into the lymph channels and gets into the circulation.

The secretion of the thyroid falls into the class known as internal secretions and exerts a profound influence upon the metabolic processes of the body, probably through the agency of the central nervous system.

Complete extirpation of the thyroid, at least in some animals, produces death, preceded by a group of characteristic symptoms after removal come slowly and resemble the disease known in man as Myxodema. If a piece of thyroid of sufficient size be grafted into one from whom the gland has been removed and the graft takes, the symptoms of thyroid removal are lessened or disappeer altogether also thyroid feeding relieves the symptoms of myxodemea. The above facts show that the thyroid must perform some important function in the animal economy and it is believed that this is by virtue of its internal secretions.

As long as theorizing is in vogue why not go a step further and say that the thyroid causes the secretion of hydrochloric acid in the stomach. We little understand the functions of the thyroid, we know the bad results of its removal and we see the effects of its not functioning properly and why not attribute to it this function of causing the secretion of hydrochloric acid by the stomach?

Whether this is true or not, this much is an open book to all observers, that nervous, hysterical people, in other words those whose thyroids are not functioning properly are always miserable dyspeptics. He who has not tried to cure his neurasthenics by giving general and stomach tonics may throw the first stone.

Then if this theory is really based on fact, that would easily account for the fact that we have the progressive loss of hydrochloric acid in the stomach. We know that the thyroid has an effect on the blood and in all cases of pellagra without exception we see a progressive loss of haemoglobin, this and the acid going hand in hand can have but one common cause.

While this theory may seem a little far fetched, it is possible to draw an analogy from goiter, a disease which has been more extensively studied and about which a great deal more is known than is true about pellagra.

Certain waters cause goiter, but when this water is boiled, i. e., when the amoeba is killed, the same water will not cause the disease. Again from eighty to ninety per cent. of cases of goiter are in woman, the same rules apply to cretinism. In the study of goiter it has also been proven that the thyroid produced a substance which acts as an antidote or antitoxine to certain toxic products of daily metabolism. How evident is the loss of this function in any well defined case of pellagra.

Goiter, cretmism, myxdema and pellagra are from three to five times as common among women as among men, the first three we know to be caused by a diseased condition of the thyroid, why are we to believe that pellagra is an exception to the rule?

We can now advance from the marshes and low lands of theory to the high hills of proven facts. Acting upon the theory outlined above, the treatment of this malady is comparatively easy. If the amoeba is really the cause of pellagra then of course we want the best amoebicide in the pharmacopea, and fortunately this has been given us in ipecac. We can give it hypodermically as emetine or per orem as Alcresta Ipecac as prepared by Lilly. My usual plan is to give a ten grain tablet of Alcresta Ipecac every four hours and keep this up for ten days or two weeks or until I am certain that all the germs have been destroyed. With this it is advisable to give a tablespoonful of castor oil each night, for the double reason of evacuating the bowels and removing the debris from the system, and further the oil such as passes down into the bowel acts as a healing agent for the inflamed membranes.

In this stage it is almost universally true that the mucus membrane of the whole alimentary canal is in a state of active congestion and more probably inflamed. The remedy that in my hands has given most universal relief is:

F. E. Condurango, 1 ounce.
F. E. Echinicea, 1 ounce.
Listerine 2 ounces.
Caripeptic Liq. 4 ounces.

Mix sig. two teaspoonfuls in water one hour after meals three times a day.

When the ipecac has been given for a sufficient time to destroy the amobea and the gastric and intestinal catarrh has been relieved by the above mixture then can be started the sine qua non in the treatment of pellagra and that is hydrochloric acid in some form. My favorite is freshly prepared chlorine water made as follows:

Take chlorate of potash 40 grains, add pure hydrochloric acid 4 drachms mix in 8-ounce bottle and when the bottle is well filled with the chlorine gas add slowly water sufficient to make eight ounces. The resulting mixture should be a rich yellow color and will be rather acid. Of this the usual dose is one teaspoonful in water every two hours. I have never known a patient who could, and did take this mixture for a reasonable length of time that failed to be cured and stay cured, some of them now as long as seven years.

The mistake should not be made, as has happened in my experience a number of times, of giving the chlorine water while the stomach is in a condition of acute inflammation. Should this mistake be made it will cause acute distress to the patient with an aggravation of all the pellagra symptoms. If the patient complains of the medicine burning his stomach and feels as if he had swallowed hot iron, the remedy should be discontinued and the Condurango mixture continued until the stomach is entirely cured. The patient should experience no discomfort from the ingestion of the chlorine water and if he can take it without discomfort continue it until he is cured. One patient under my care took it regularly, without my orders, for twelve months some eight years ago, and has never had a return symptom since. Her case had been pronounced hopeless and did indeed look so when she came into my hands.

If the theory advanced in this paper that the faulty action or possibly non-action of the thyroid accounts for most of the symptoms of pellagra, then we could reasonably expect the chlorides to prove beneficial in its treatment. The Italian physician discovered years ago that sodium chloride was beneficial in the treatment, and we know that possibly no known drug has as good effect on goiter as the long continued use of ammonium chloride. The best known preventive treatment of puerpural eclampsia which it doubtless causes by non-action of the thyroid is chlorate of potash. The chlorides seem to be especially stimulant to the thyroid, this being true we would reasonably deduct the chlorine or the cholrides would benefit pellagra and in actual practice this theory works out most beautifully and satisfactorily.

As to the diarrhea in pellagra, the castor oil usually takes care of that, and it is scarcely ever necessary or advisable to give any astringents or other remedies to check the diarrhea. For the gaseous fermentations that is very general, probably no remedy meets this indication so well as some of the various mineral oils, my preference is liquid vaseline on account of its high specific gravity. As to the loss of hemaglobin and the legion of nervous symptoms ,they have to be met by the usual and well known remedies.

In regard to the diet of the pellagrin, I put no restriction on the diet, but advise a well regulated and well balanced ration. I neither advise or interdict a proteid diet. The best criterion is the natural wants of the patient, but my experience leads me to push the carbohydrates, especially the saccharine group with an abundance of fruits as even more desirable than the proteids, but we should not eliminate either or any but let the patient eat what he most desires and what he can best digest.

I have dealt pretty extensively in theory, now what of the results? In the past two years I have treated along the lines outlined above one hundred and seventy-five cases with a mortality of less than three per cent., and these cases were practically moribund when they came under my care. This is a per centage of cures that I can not boast for measles or whooping cough; diseases that we do not look upon as such dreaded scourges as we do pellagra, and the time is now when we can attack this pestilence with a degree of confidence that a few short years ago bid fair to scourge our fair Southland as a consuming plague.

I prescribe large quantities of Tongaline for many conditions for which it is particularly indicated, but I obtain especially gratifying results from its use for what are commonly called "colds," the symptoms of which are chills, fever, sneezing, coughing, etc., and for which the system requires, first of all, prompt and thorough elimination.

EXTENSION OF SERVICE OF THE STATE LABORATORY

By C. A. Shore, M. D., Raleigh, N. C.

The modern state no longer questions its responsibility for the health of its citizens; it realizes that the health of the individual is vital to the life of the state both in peace and war.

The whole system of public health work has been built on this foundation. In the evolution of the realization of public responsibility the old relationship of the doctor to his patient has remained undisturbed. As a practical matter the physician can best attempt the cure, while on the other hand the organized service of the state is necessary to secure prevention. There has, therefore, been a tendency to make a sharp division between the practice of medicine and the prevention of disease.

As a matter of fact the two are closely related and interdependent. The state must help the practitioner in his attempts at cure, and the physician's efforts are as often directed to prevention as to cure. There is nothing nobler in the everyday life of mankind than the unquestioned service of the family physician in preventing sickness among his patients. It is an unconscious and self-forgetting service which he daily performs. In return he has the right to expect from the state every possible assistance in his attempts at cure.

The public laboratory has always been a meeting point of the two points of view. It has obligations of service to the individual practitioner, as well as to the general cause of prevention. Indeed the whole science of modern medicine rests on a laboratory basis—without bacteriology medicine would still be the "Healing Art" and nothing more. The present day public laboratory has been chiefly devoted to diagnosis, though much of the best research work is still done in certain of these laboratories. The work of diagnosis in the municipal and state laboratories has become a work of necessity, but the value of laboratory diagnosis is directly related to the quickness in which it is made and therefore the establishment of municipal laboratories should be encouraged wherever practicable. Every city of 20,000 population should have its own laboratory for diagnosis and for control

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*Read at the Charleston, S. C., meeting of the Tri-State Medical Association February 20, 1918.

of its milk supply. The state laboratory should continue, and extend as need arises, its services in diagnosis, but should set no limit to its usefulness—its only limitation should be the possibility of service.

Within the last twenty years there has been a wonderful development of vaccines, serums and antitoxins which are now accepted as reliable and necessary curative and prophylactic agents. Many of these products have been so expensive that their use has been limited, and in many instances the cost has been so great that the poor have been deprived of their benefits. The state laboratory can often render a great service in making some of these products for free distribution, or at least distributing them at a greatly reduced price. I will say just here that it is not my purpose to advocate the indiscriminate manufacture of all biological products by the state, but only when their manufacture is a practicable matter. In theory, however, it may be said that if it is advisable for the state to control its fertilizers there can be no objections to the control of its medicines.

In North Carolina the development has been gradual and as yet small—the laboratory attempting only those things for which there was great need and in which help was practicable.

The first product atempted was typhoid vaccine. We reasoned that if typhoid fever could be eliminated from the U. S. Army it could also be done in North Carolina if the whole population were immunized against the disease. Of course we realized that it was impossible to compel vaccination as it is done in the Army, but we could at least vaccinate a portion of the population. In 1913 when we began this work, the typhoid vaccine sufficient for the three injections retailed at $2.50. The cost alone was a sufficient reason for a limited use; so we began making it and distributing it free, using a vaccine identical to that used in the U. S. Army. The demand at once taxed our utmost efforts at supply, and for the last three years we have sent out each year over 400,000 doses. We estimated that one in every six of our population has been immunized. The results are already very apparent. I believe that you can go into any community in North Carolina and every doctor there will tell you that there is less typhoid fever than there was five years ago. Now I do not claim that the typhoid vaccine alone is responsible, for there has been a general awakening of interest in public health, but I do believe the vaccine has had an important share in the good work.

There are still those who argue against the attempt to immunize the general population against typhoid fever because they fear that less reliance will then be made upon general sanitation. To my mind this fear is groundless, and a contrary result is actually realized. It has been my observation that if the public can be interested in any one phase of health work that they are thereby more responsive to all other intelligent public health propaganda. The community which has been vaccinated against typhoid fever is the very one most easily induced to install sanitary closets.

Recently we have also distributed paratyphoid vaccine and a triple vaccine similar to that now used in the U. S. Army, composed of typhoid, paratyphoid A and paratyphoid B. There is very little paratyphoid fever in North Carolina and we recommend the use of the paratyphoid vaccine only when there is known exposure.

The great success of the typhoid vaccine work showed us the need of this kind of service and where practicable we have extended it. Small-pox vaccine is made and distributed free. It is now accepted that vaccination is the only protection against small-pox, and that quarantine is ineffective. Vaccination should be required of all and when this is done it is but right that the state supply the vaccine.

Last year in North Carolina we had 530 deaths from diphtheria. Five hundred of these we may safely say were due to a failure to get a prompt treatment with antitoxin. We now have our own diphtheria antitoxin ready for distribution, and by next fall we hope to have one or more distributing stations in each county where diphtheria antitoxin can be procured at 25 cents per syringe—the 25 cents to cover the cost of package and the price will be the same whether the syringe contains 1,000 or 10,000 units. We believe that we can save some of those 500 children. With the plant for the diphtheria antitoxin established, we can also undertake economically the manufacture of tetanus antitoxin and normal horse serum, and these products are now produced.

Pertussis vaccine has been distributed for several months free of charge. We recognize that its exact value has not been fully established but the reports have so far been very favorable, and we hope to accomplish some good in the fight aganist this very serious disease.

In general we may describe our policy in regard to these products as one of expediency—wherever we see the need we attempt to fill it, if the funds and the laboratory force are available.

THE TYPHOID FEVER IN LYNCHBURG, VA., DURING 1917.*

By Mosby G. Perrow, Ph. D., Health Officer, Lynchburg, Va.

There was a total of 118 cases of typhoid fever in Lynchburg in 1917, including 20 non-residents. Deducting this 20, 98 cases are left whose infection may with justice be charged against conditions in the city. Of this 98, 83 or 84.7 per cent. drank spring or well water. These springs and wells are located either within or near the city limits and were and are exposed to the pollution necessitated by thick habitation. That they were at that time actually polluted was shown by both chemical and bacteriological analyses. The fly and privy theretofore incriminated seem to have had little or nothing to do with the spread of the infection for the year 1917, as only five cases had privies even remotely adjacent and all five of these drank polluted spring water. Milk was clearly eliminated by all methods of investigation.

The city of Lynchburg is situated on the James River, a stream that is polluted with sewage though falling within the limits of the permissible quality of water to be filtered according to the International Joint Commission. For ten years the city has gotten its drinking water by gravity from an impounded reservoir on Pedlar River 22 miles distant. To provide against an accidental break in the Pedlar pipe however, pumps were installed connecting with the James River, which water could be used during the emergency while the Pedlar pipe was being repaired.

Early in May such a break in the Pedlar pipe occurred, and before midnight on May 9, the James River pumps were set to work. The pumping continued to 10.30 p. m. May 16, when the Pedlar main having been repaired, the pumps were stopped and the Pedlar water again entered the reservoirs. The water, however, had barely shown bacteriologicallly safe, when on June 4th the turbidity of the Pedlar water rose suddenly to 120 and went steadily upward to 400 on June 9. The water remained muddy for two months. On August 11, however, it had cleared to 10, which is tolerably clear and exceedingly clear when compared with the former high turbidity.

This period of muddiness was unprecedented in the city records both in degree and length of turbidity. So much suspended matter existed in the water that heavy charges of liquid chlorine failed to sterilize, and the water during the whole muddy period showed infection with Colon bacilli.

When the James water was first pumped on May 9th, the people were notified to boil all water. Probably most of them obeyed, but many went at once to drinking spring and well water, and since this water was perfectly clear and seemingly pure it usually got by without being boiled. The number of city typhoid cases jumped from none in May to 28 in June. One might naturally conclude that the James water caused this outbreak, for both by sanitary survey and analysis the James water was polluted. An examination of the data, however warrants a different conclusion. Of the 28 cases, 26 drank spring or well water. Analysis of all these springs and wells showed pollution. In addition to this, had the James water been infected with typhoid bacilli, many more than 28 cases would probably have resulted. Either the James at the time was not so infected or all the people that used it boiled it, for only two users of the James water in June had typhoid. An outbreak of typhoid fever caused by infection of the common water supply is usually preceded by a prevalence of diarrhea. Continued inquiry among physicians failed to detect any abnormal amount of diarrhea, and what existed seemed limited largely to spring and well water users.

As has already been stated, when the Pedlar water was again turned in, it became on June 5th excessively muddy and remained so for two months. This drove more people than ever to springs and wells. Consequently in July, the number of city cases rose to 38, 36 of which drank spring or well water, and fell in August to 20, 13 of which drank from springs and wells.

During the first part of August the water was steadily clearing, and fewer people drank from springs. In September the city cases dropped to seven, five of which used springs. In October there were two cases, one drank spring water and the other was a negro youth whose history was indefinite.

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*Read before the Lynchburg and Campbell County Medical Society, February 4, 1918.

The above datá then seem to justify the conclusion that the typhoid in Lynchburg during 1917 was caused by drinking from polluted springs and wells which was induced by an aversion to the discolored and muddy water supplied by the city. Those that used the city water, on account of its muddy appearance usually boiled or filtered it, while consumers of the spring and well water seldom boiled it on account of its perfect clearness. All this but illustrates once again the well known fact that the people must be supplied with an attractive as well as a safe water by the municipality, or a large percent will seek an attractive water elsewhere at any risk.

It is desirable here to make mention of one of the above springs that is known to have caused seventeen cases of typhoid. This spring flowed out of a cast iron spout and was concreted around in the most approved manner. The water was as clear as crystal and tested to a turbidity of zero. Rain never caused the least discoloration. The nearest house was over 100 yards away with a ravine between the spring and the house, and the nearest house on the same side of the ravine was 300 yards distant; this house was properly and completely sewered. A cursory sanitary survey would have pronounced the water safe.

When toward the middle of July, however there were reported several cases of typhoid that drank out of this spring a thorough examination of the surroundings was made. It was found that a 12-inch terra cotta sewer pipe ran 56 feet away in the hill above the spring seven feet below the surface of the ground. Bacteriological examination of the water showed colon bacilli present in 1 c.c. and chemical analysis gave positive evidence of sewage pollution. The leak in the sewer pipe may have been near a spring feeder and thus ebbed directly into the spring, or the sewage may have filtered some distance through the red clay. Clay when thick enough filters fairly well until overcharged. It should be recalled here that the sewer pipe was seven feet in the ground and thus the sewage escaped the activities of the soil bacteria which probably are of as great or greater purification value than the filtering effects of clay.

This spring is a splendid example of the fact that no spring or well in a thickly settled community can furnish a safe drinking water. Where surface wash above ground is provided against, a break in a sewer under ground is likely at any time to infect the supply. Of course such springs and wells should in all cases be closed by the health authorities.

THREE TYPES OF MENTAL DEFECT.*

By Wm. H. Higgins, M. D., Director Psychopathic Clinic, Medical College of Virginia, Richmond, Va.

Whenever medical science can reclaim an individual from the dependent class, it is rendering to the state a distinctly economic service. The problem of the mentally deficient logically falls under this heading, as no type or condition of mankind is more definitely a burden to the community than these unfortunate victims.

There are now listed in the State of Virginia approximately 5,000 feeble-minded persons, and there are probably twice that number whose mental retardation has only partially incapacitated them from self-sustainment. Certainly no one would venture a hopeful prognosis for the fully developed degenerates, but to what extent the borderline or high grade type can be prevented or relieved will depend in a measure on our efforts.

Formerly, mental deficiency was considered a distinct entity, varying only in degree, but characterized by a uniformly gloomy outlook. We were disposed to look up on the defective as a necessary evil, a by-product so to speak, of our natural evolution. Recent studies, however, have shown us the gross injustice of this attitude. Obstetricians have demonstrated by reliable statistics, the baneful results of birth traumatisms. The Euginists have clearly established by the Mendelian Law the transmissibility of the defective germplasm. Physiologists have defined the functions of the ductless glands, and their relation to mental and physical development. In a like manner, the role of chronic infections in their relation to the cerebral reactions in the young is now a matter of common knowledge.

Thus it seems that the time has come

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*Read before the Richmond Academy of Medicine and Surgery, Richmond, Va., October 10, 1917.

when a classification of mental defect according to degree should be abandoned in favor of an etiological basis for differentiation. We should not be so much concerned as to whether the child is an imbecile or a moron, but whether he belongs to a type amenable to treatment or not. It will then be possible by intelligent individualization to lessen the ever increasing contributions to this class.

The more scientific methods, which are now practiced in the public school systems, have strikingly demonstrated the different grades of mental development in children. Supplemented by the newer psychological tests, they have brought to the medical profession, problems which rightly belong in its domain. The mere diagnosis of mental deficiency or feeblemindedness is not satisfying, nor is the cloak of heredity acceptable as a cause in all types. A definite etiological basis is required.

The purpose of this paper is to illustrate by case reports three types of mental defect of known origin.

Case 1. White boy; aged 10, was admitted to the psychopathic clinic one year ago, because of general mental deficiency and nervousness. His family record is clear, both in regard to immediate and distant relatives.

"He was healthy as a baby, and weighed 36 pounds at one year of age. Nothing abnormal was noticed in his teething, walking or talking. His mother states that he was bright and manifested the mental activitie sof other children his age.

"During his fifth year, evidences of backwardness and lack of self-control began to manifest themselves. Attacks of screaming without cause were common. Two years ago he had several fainting or unconscious spells, the exact nature of which could not be ascertained.

"He entered school one year ago, at which time, he was nervous and restless, constantly moving from place to place, spoke very indistinctly and showed absolutely no academic ability.

"On admission to the clinic, his mental examination showed a restless, unstable child with a marked deficiency in all lines. According to the Binet test, he had a mental level of 5.3."

On physical examination, the chief points of interest were (1) large head, (2) drooping right eyelid, (3) pads of fat over shoulders, (4) breasts and thighs, (5) abnormally fat abdominal walls, (6) small hands with short tapering fingers, (7) negative Wassermann, (8) increased sugar tolerance and (9) lack of perspiration. An X-Ray examination of his skull was attempted several times, but he would not submit.

A probable diagnosis of hypo-pituitarism with a possible thyroid deficiency was made.

The treatment has consisted of alternating anterior lobe pituitary extract with thyroid extract throughout the year.

An examination at this time shows that he has lost from 12 to 15 pounds in weight, chiefly from his abdomen, his restless temperament has become markedly lessened, his articulation is better, and the following notes dictated by his teacher describe his further improvements: "Reads well in Primer. Can repeat Mother Goose Rhymes and other verses. Learns songs readily, writes his name well and shows improvement in coordination and self control. He is eager to work, is quiet and happy."

The vagaries of the ductless glands have held the attention of the ablest workers in medicine today. The functionating of these bodies and their interrelation with each other are so complex, and apparently so contradictory at times, that it has been difficult to designate clinica lsyndromes for each gland. However, out of the maze of clinical and experimental work, sufficient data has crystallized for practical purposes by which the recognition of many of these syndromes may be made.

The pituitary gland, in which for the present we are particularly interested, is composed of two distinct parts, which differ in their structure, in their physiological activities, and their development.

Complete removal of the anterior lobe is usually and probably always followed by death. The posterior lobe, however, may be exterpated without necessarily producing death. The experimental work of Cushing and others have shown that a hypo or a hyper-activity of either lobe will produce well recognized pictures. When the secretion of the whole gland is over-active, glycosuria, loss of body weight, excessive sweating, hypertrchosis, and osseous overgrowth will result. When this overgrowth antedates puberty or ossification of the epipheses, gigantism follows; occurring subsequently, acromegaly develops.

In states of under activity (hypopituitarism), the condition is suggested by an increased carbohydrate tolerance, adiposity, hypotrichosis and reversion to the feminine type of the body as shown by deposits of fat about the shoulders and breasts, and the symmetry of the extremities. Further evidences are dryness of the skin, sexual under development and mental retardation. The hands are short with stubby pointed fingers, and the abdomen is greatly enlarged by deposits of fat.

Between these two extreme types there may be found a variety of syndromes, depending on the lobe involved.

It has been shown that there may be in the same individual a lowered activity of one lobe with a compensatory acceleration of functions in the other lobe. Or again, other glands may compensate for altered secretions in the offending one, thus giving rise to an entirely new symptom-complex.

Unfortunately, these so called polyglandular syndromes are the most frequently encountered, and are the most difficult for diagnosis. Studies therefore of the pituitary gland involve the entire field of the endocrine system.

The second type of mental defect is illustrated by the following history.

Case 2. White girl; age 13, was admitted to the clinic because of repeated failures in school and tempermental instability. There was nothing of significance obtainable in her family history, with the exception of a record of poor health in her mother. She was born at full term, weighing 11 pounds. As a baby, she was healthy aside from a history of convulsions at the age of 18 months. She was normal in her walking, talking and teething. During recent years she has had several attacks of rheumatism which she described as aching pains in her muscles, knee joints and back. These attacks were sufficiently severe to keep her in bed.

She was irritable as a baby, and in the past few years has developed a rather quarrelsome disposition with a tendency towards disobedience. Her school record shows that she spent 4 terms in 1A, 3 terms in 1B and 2 terms each in 2A, 2B and 3B.

Her mental examination showed a poor motor co-ordination, a lack of imaginative and retentive ability, with no initiative. Her mental level was 7.3 (Binet).

Physica lexamination was entirely negative. The blood gave a positive Wassermann reaction.

Under specific treatment for 8 months, the transformation has been magical. There has been no return of the rheumatic pains, her former sallow complexion is now replaced by a ruddy color, and a definite alertness has taken the place of her usual languid manner. Formerly quarrelsome and irritable, she now is mild tempered and obedient.

Her school record for the last term showed marked improvement in all subjects. Her mental level now is 9.2 in comparison with 7.2 one year ago.

On a former occasion, I made an analytical report of the first 50 children admitted to the psychopathic clinic. A chart was shown giving the age, mental level physical defects temperament and compliment fixation tests of this series. Forty-two per cent. gave a positive Wassermann reaction. In this report it was pointed out that the positive reactions were found much more frequently in the incorrigible, ill tempered high grade defectives than in the mild tempered low grade types. This observation has been verified by our more extended series, and it probably accounts for the low percentages of positive reactions reported from institutions whose enrollment is composed largely of low grade defectives.

In view of the known relationship existing between acquired syphilis and the central nervous system, the frequency of congenital lues manifesting itself in these points of predilection should be of vital interest to us. The method of transmission of spirochete from parent to child is still open to discussion. Suffice it to state that in the light of our present knowledge, the weight of evidence favors maternal transmission. Thus the offspring becomes directly infected with the organisms circulating in the blood.

The pathology differs in no way from that found in acquired infections. The disease may implicate the blood vessels, meninges, or the parenchyma. However, owing to the proximity of these structures, it is not likely that one part would become involved without the others showing the same pathological process.

The third type is represented by the following history: Case 3. White boy, age 12, was admitted to the clinic in February, 1917. He had made repeated failures in his grades and manifested no interest in his work. At home, sitting down was his chief occupation, although no sickness was complained of. His condition is aptly described by his teacher as follows:

"His head propped in his hands, elbows resting on the table was the only evidence much of the time that Claude, a frail under sized boy, was in the room. He seldom responded to any questions, and only then if he knew that he was being watched. He never volunteered any information for the first three months of school. His memory was poor, his spelling was fair, his language showed not only a lack of imagination, but a lack of words as well. He showed no interest in reading, and made no effort to concentrate his attention on a problem. He would not enter into any of the games and he manifested a genuine dislike for physical exercise in any form.

His mental level (Binet) was 10 years.

Physical examination was negative with the exception of his blood which had a haemoglobin reading of 50, and an eosinophilia of 27 per cent. Uncinaria eggs were found in his faeces.

At the end of the past session, he was showing a keen interest in his work, games became a pleasure—in fact a general awakening had taken place. He was promoted and is now in one of the regular grades."

The ravages of the hookworm are too well known for discussion. During the past decade, various investigations including the Rockefeller Sanitary Commission, and the United States Public Health Service have absolutely demonstrated the dangers from this source to which the children of the South are subject.

In 1916, the Rockefeller Foundation published the report of an extensive investigation of the effect sof hookworm disease on the mental and physical development of children. Quoting from their conclusions:

"Hookworm disease interferes very radically with mental development. Treatment alleviates this condition, to some extent, but it does not immediately at least permit the child to gain as he would if he had not had the infection. The longer the child has the disease, the more will he lose mentally, and the less rapid will be his mental development after he has been treated.

Our conclusions from a study of these three types of mental defect would seemingly justify us in at least with holding our prognosis for backward children, until an etiological basis has been determined. The unscientific classification of the mentally deficient has doubtless been in part responsible for the indifference manifested towards its logical treatment.

Diagnoses dealing in generalities should no longer be acceptable. The specific cause should be the descriptive term.

The problem is a live one, and calls for our most careful consideration.

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1317 Park Avenue.

MIGRATORY FOREIGN BODY IN THE ABDOMEN.*

By Seavy Highsmith, M. D., Fayetteville, N. C.

Bearing on the subject, I wish to report briefly only one case which came under my care for treatment. While similar incidents are perhaps of infrequent occurrance, and usually accidental, they emphasize the fact that the unexpected in medicine and surgery often happens. Diagnostic skill is frequently unable to reveal the real existing lesions.

On November 20th, 1917, Patient Wm. Clark came to see us about a stomach trouble. History: Farmer; age 63; twice married. There were several children by each marriage living and well. Father died of a "throat trouble' when old. Mother died at advanced age, cause not known. Three brothers and one sister living and in good health.

Personal History: Had usual diseases of childhood, typhoid fever, uncomplicated, seventeen years ago. Habits normal and regular. Did not use alcohol. Used coffee and tobacco moderately.

History of present trouble: began in 1915 two years previous with pain in epigastric region and tenderness of lower abdomen. The pain was always present with acute exascerbations. Being more acute on taking exercise and also after eating while digestion was going on. Suffered from gas and distention, frequently eructated but did not vomit. During the two years of his illness 1915-1917 had at times noticed dark blood in stools. Had frequently during these two years taken treatment for "indigestion" and "stomach trouble." Constipation existed throughout and had reached the stage where it was difficult to get bowel movement. Being afraid to eat, he had steadily lost weight.

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*Read before the Tri-State Medical Association of the Carolinas and Virginia, Charleston, S. C., February 21, 1918.

At the time of first examination temperature was normal. Heart and lungs normal. Marked distention of abdomen and tenderness about the pylorus. I could only think of gastric or duodenal ulcer. Gave him instructions as to diet and the usual medical treatment along this line. One week later he reported again. Symptoms had only temporarily improved but returned again with the usual pain and distress.

On this date, November 30th, 1917, was admitted to the hospital (Cumberland General Hospital, Fayetteville, N. C.). The double test meal on the following morning showed free H. C. L. 15 per cent., combined acids 2 per cent. The stomach contents 240 c. c. consisted of starchy elements of second meal, no meat fibers. Microscopic showed starch granules, yeast cells an dred blood cells.

Urinalysis: Color deep amber; reaction acid; sp. gr. 1030; albumen positive; sugar negative; indican. great excess; sediment mucous, some byaline and a few granular casts.

The X-Ray examination showed only stasis of the stomach. Our hospital diagnosis was obstructive duodenal ulcer. As his trouble had already lasted two years and his present symptoms were so distressing, we decided to do a gastroenterostomy.

I was associated in this case with Dr. T. M. West. On December 8th, 1917, patient was taken to operating room. Upon making our incision and examining the stomach and duodenum, we were not able to locate an ulcer. There were however some rather dense adhesions in this region which we dissected free. We then examined the gall bladder. No stones were present nor any active inflammation found.

Not being able to locate the seat of our trouble in the upper abdomen, we decided to lengthen our incision and see if the appendix was at fault. On picking up the appendix it did show decided inflammation at its distal end with a constriction resembling scar tissue about the center. The tip was adherent to a mass of bowel and omentum covered with a "chicken fat" plastic exudate. Feeling amply rewarded for our search, we removed the appendix in the usual way. After drying the wound, the folds of the bowel where the tip of the appendix lay were separated with the intent of freeing adhesions. In doing this an object appeared between the folds of the bowel. On removing it we found it to be an ordinary cambric needle. It was pinned transversely through two folds of the bowels, the eye of the needle in the lumen of one fold of the gut and the point in the lumen of another fold. There was some slight fecal odor with the escape of a bubble of gas at the point where the needle was withdrawn. A decided plastic exudate was thrown around the mass of bowel in which the needle was embedded.

The circulation of the gut was in good condition. It looked as if it would be able to take care of itself. We therefore closed our wound in the usual manner and made a stab wound below the incision and over the point where the needle was found. Through this stab wound we inserted our drains consisting of two medium size cigarette drains and one of gauze tape.

With the exception of slight drainage for a few days, the patient made an uneventful recovery and was able to leave the hospital on the twenty-first day after his operation.

The patient could never determine how the needle got into his anatomy. He never remembered swallowing anything that gave him trouble nor had ever been stuck with a needle to his knowledge. I think he must evidently have gotten it by mouth as the adhesions at the pyloric end of the stomach would indicate that it had passed out at this point again to enter the bowels lower down.

Our only regret is that we did not locate the needle in our X-ray picture which might easily have been done if we had been looking for a stone in the kidney or ureter, or if for any reasons we had made a picture of the lower abdomen.

Physicians who long ago discarded ipecac medication because of the uncertainty of enteric coatings are welcoming ipecac "back to the fold" since it is now possible to administer massive doses of the drug without coating of any kind.

This heretofore unknown method of giving ipecac is made possible through the absorption of ipecac alkaloids with a purified form of hydrated aluminum silicate; and since, in this form, the alkaloids of the drug are not liberated until in the presence of an alkaline solution, the drug passes the stomach unchanged and the alkaloids are liberated in the intestinal secretions.

TUBERCULOUS MENINGITIS IN INFANCY AND CHILDHOOD.

By Dandridge P. West, M. D., Norfolk, Va.

That tuberculous meningitis enjoys the distinction of being a clinical entity is a mere commonplace and goes without saying, but that in reality it is not a disease in itself but merely a symptom of one may not have occurred to many. While the physical examination of many cases often present perfectly normal findings, excepting those of course referable to the central nervous system, autopsies on all such cases have, so far as my own experience is concerned, invariably shown foci outside the central nervous system, and which were accepted without doubt as the primary sources of infection.

It is assumed that the respiratory tract is the usual route of the infection. Indeed, it is difficult to autopsy a case of tuberculous meningitis without finding this tract involved somewhere. Perhaps the only evidence may be one or two small lymph nodes, either peribronchial or mediastinal.

But again, we must not consider too lightly other possible routes of infection. There are a number of authorities, Calmette, for instance (1), who declare that the bacilli, especially the bovine type, can pass through the intestinal tract without causing any lesions at the portal of entry. Opposed to this theory are such eminent authorities as Ghon and von Pirquet (2) among the older writers, and Dunn (3), of Boston, in a recent article on tuberculosis in infancy. The latter admits, however, that the possibility of the bacilli entering the body of the infant without a lesion at the portal of entry is still an open question.

Wollstein (4) has definitely proved the possibility of a congenital infection, while again, the vaginal route has been even considered a very good one through which tuberculosis may be contracted (5).

Few realize, perhaps, just how frequently tuberculous meningitis appears in early childhood. The infrequent appearance of cases occurring in general practice might lead one to believe the disease a rare condition. Or, the possible misunderstanding of the symptoms may well be the cause of many cases being overlooked. As a matter of fact, those who have to do with hospital wards and clinics realize how comparatively frequent the condition arises or appears. For instance, Holt states that 70 per cent. of the cases of acute meningitis occurring in young childhood, apart from the epidemics of cerebro-spinal meningitis, are tuberculous, and that 8 per cent. of the deaths in the Babies' Hospital, four years prior to this report, have been from tuberculous meningitis (6). Out of 238 cases of tuberculosis reported by Still, of London, 49.3 per cent. were tuberculous meningitis (7).

Tuberculosis unquestionably finds its most fertile soil in infancy and early childhood; and the significance of this melancholy fact is that where tuberculosis appears in its most severe form, as in children, tuberculous meningitis is its usual expression. The invariably fatal result of tuberculous meningitis is a crying appeal to us that if we expect to control the condition at all, we must diagnose and treat successfully tuberculosis in children during its incipiency, or before the symptoms of tuberculous meningitis arise.

Inasmuch as actual contact or exposure is by far the most likely cause of infection, it is our duty as physicians first to detect these sources of danger and then remove the babies and children as far from this zone as possible.

A few months ago I began the work of testing children of tuberculous parents in order to ascertain as far as possible just how soon children were infected. Von Pirquet's skin reaction (human) was employed, together with careful physical examination. This work was done in the anti-tuberculosis clinics, where, of course, a known exposure was a certainty. Unfortunately, I had to leave the city in which the work was started before many cases were tested. However, I did examine 42. Four of these cases were under one year of age, and all except one were breast fed exclusively. Three of these gave a positive skin reaction without any other evidence of being infected save, perhaps, a slight enlargement of the cervical lymph nodes. Seventeen were under five years, 10 of whom gave a positive reaction; 1 was not recorded ,and 1 was marked doubtful. Of the entire series of 42 cases, 29 or about 70 per cent. gave a positive reaction, 3 were doubtful and 2 were not recorded. Only 4 of the whole series showed any signs of lung affection; 16 showed a slight glandular involvement, while the rest gave absolutely no evidence of being infected other than the skin reaction.

It seems to me, therefore, that one of the best means we have of detecting and isolating early cases of tuberculosis in children is in working through the anti-tuberculosis clinics. Moreover, the reliable testimony which we can obtain so easily through the application of the von Pirquet skin test makes the work still easier. No mention need be made of the efficacy of the skin test. It is quite generally accepted as a most reliable source of information in early childhood. For those not so familiar with the test and its usefulness, I would respectfully refer you to the excellent article and report recently published from the Johns Hopkins Hospital, by Dr. Knox (8).

Symptomatology.

I have digressed somewhat from the subject of this paper, but I feel that the points I've made have been warranted.

The symptoms of tuberculous meningitis present an entirely different picture usually from those of either septic origin or epidemic cerebro-spinal form. In the first place the time of onset is almost invariably doubtful. Quite naturally parents will always attempt to give you some incident which, in their opinion, might be the starting point. Perhaps a slight fall, an injury of some kind, however slight, a cold in the head, various gastro-intestinal symptoms, headache, constipation or drowsiness; but the significant fact is, that the onset for the most part is gradual.

There may be periods during which the patient appears quite normal and greatly improved; but once symptoms begin, the course is fairly steady and, contrary to some authors, quite arpid.

The average duration in 300 cases reported by Holt was two and a half weeks (9). Rankin gives 23 days as the average duration in his series (10), while Meyers' series of 105 cases corresponds with those of Holt's as being 17 days (11). The most significant sign during the period of questionable or early diagnosis is the breathing. Examined while the child is sleeping or otherwise quiet, the breathing will be found to be distinctly irregular, but following no definite types, as for instance, Biot's or Cheyne-Stokes. The periods of aponea, in other words, are distinctly irregular in time of occurrence.

Neck rigidity is probably the next most useful sign, as it is present in practically every case from the onset. Kernig's sign cannot be relied upon unless present, and it is absent in a great number of cases throughout, while Babinski's sign is absolutely of no value under two years of age. Other reflex signs are only of questionable value.

Cases of tuberculous meningitis are usually of two types, viz., either they are quiet and drowsy throughout, or they are markedly restless, noisy and irritable. The former type is the more common among older children.

The temperature is as a rule but slightly elevated, though it may indeed rise suddenly to a very high level. This sudden high elevation usually occurs just before death.

The von Pirquet reaction is, in my opinion, an extremely valuable evidence. It occurs in practically every case unless the patient is moribund or the resistance is otherwise extremely low. Occurring in cases under two years of age it invariably means an active tuberculous process somewhere, and when seen with symptoms above noted it gives one the strongest kind of evidence.

The eye grounds may also present signs which may be extremely valuable in cases where local objections make lumbar puncture impossible. Choroidal tubercles, in other words, are found now with far more regularity than they formerly were—they are looked for more regularly, and when found, they offer pretty conclusive evidence (See Marple; Ophth., Lond., 1912, x, 559-563).

Skin tuberculides have not been found in any series that I've been able to study.

Leucocytosis is nearly always present. Meyers records 48,000 as his highest. The average occurring in the Babies' Hospital, N. Y., during my sojourn as a member of the resident staff, was 18,000, while the polyphonuclear leucocytes were 70.7 as an average and 90.9 as the highest.

Finally, the spinal puncture offers the best and surest means of diagnosis. The operation under modern technic is very simple and safe, while, in case of tuberculous meningitis, the organism should be found in practically every instance. The fluid is nearly always of crystal clearness and shows increased pressure. Nogochi's globulin reaction will be found positive. The cell count, which should be done immediately after the fluid is drawn, will show an increase of from 50 to 600 cells. If the fluid is carefully taken, not shaken, and either incubated or refrigerated, a delicate film will in the vast majority of instances form after 10 to 24 hours' standing. The examination of this film, following the technic I have described in other columns (12), will, I believe, invariably show the bacilli.

Prognosis.

True cases of tuberculous meningitis offer very little hope of recovery. While there are a few instances on record of recovery, the vast majority certainly are fatal. Archangelsky reports a recovery in an eight-year-old child in whom the bacilli were isolated from the spinal fluid (13), while, again, Pitfield also, reports three cases of recovery in children, but he does not say whether the bacilli were isolated from the spinal fluid or not (14).

Modern treatment offers very little hope. In view of the fact that tuberculous meningitis may be rightly looked upon as a general infection it is hard to realize how any present-day treatment can be of any avail. Drawing off the spinal fluid at short intervals may help to alleviate pain and pressure. Drugs, internally or intra-spinally have, so far, been absolutely useless except as aids to symptomatic treatment.

Summary.

1. Tuberculous meningitis is a symptom of a general tuberculous infection, and is, therefore, always secondary.
2. As actual contact is the most likely source of contamination, children living in close tuberculous environment should be sought out and treated as early as possible.
3. The von Pirquet skin test is most reliable in infants and children under two years of age.
4. At present, any good results from the treatment of tuberculous meningitis must be looked for through the treatment of tuberculosis in its incipiency, or before symptoms of meningitis arise.
5. The tubercle bacillus can, in the hands of the experienced, be isolated from the spinal fluid of tuberculous meningitis patients in practically 100 per cent. of cases.

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(12) West: Va. Med. Monthly, Feb., 1918.

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503 Taylor Building.

The Reasons.

why Gray's Glycerine Tonic Comp. should be employed in La Grippe are numerous and strong. First of all, this remedy has proved its unique value in every epidemic that has occurred in this country. It fulfills pleasantly, effectively, scientifically—the ever present need for supporting tonic medication: it fortifies the system and enables the patient to withtsand the ravages of the disease. One other exclusive feature of Gray's Glycerine Tonic Comp. is that it has a universally acknowledged specific influence upon the respiratory and nervous symptoms of La Grippe—it palliates these symptoms—ALWAYS — without the necessity of disturbing the stomach, depressing the heart, and befogging the mental powers, with cough syrups, antipyretics and narcotics. It is a well proven fact that if Gray's Glycerine Tonic Comp. is employed in La Grippe there is no necessity of administering the usually employed large doses of analgesics and antipyretics ;moreover, the danger of exhausting sequelae is reduced to a minimum or entirely obviated. In short, Gray's Glycerine Tonic Comp. not only simplifies the treatment of La Grippe, but robs it of most of its distressing features and dangerous complications. As a supporting reconstructive agent in convalescence from influenza no remedy acts so effectively as Gray's Glycerine Tonic Comp. It enable sthe patient to eat, digest and assimilate food, imparts vitality to the nervous system, restores constitutional vigor so that the system is fortified against the occurrence of complications and sequelae.

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EDWARD C. REGISTER, M. D., EDITOR

CHARLOTTE, N. C.

THE CAUSE OF LIFE.

Recently an editorial in the Journal of the American Medical Association discussed, "The Cause of Death." By a critical analysis of cerebral physiologic function the wirter aimed to determine —and to quote him, "perhaps" did determine which one of the brain structures— in bodily death, is the first structure to actually "die"; and by an equally careful and profound study of biologic chemistry, he sought to accredit some specific chemical in the circulation with having put that brain structure out of functioning— and to thus account for the death of the body.

The brain structures mentioned as having possible paramount "vital" influence, were the respiratory and circulatory groupings that he referred to as "centers"; while the biochemical structures studied, as possible fatal poisons, included everything between the known physiologic and pathologic secretions and excretions of the glandular system, clear through to a last speculative toxin that was itself assumed to be produced by an infection that had been autoinvited by existing pathologic conditions.

The writer ruled out the circulatory center as being the king of "centers," and made the respiratory center have the last word in life's drama; and made this last conjectural toxin bring about an acidosis, that rung down the curtain.

He was discussing what he called a "natural" death; but passing as immaterial here all that he may have meant by the word "natural," it would seem that the editor in so nicely and finely delimiting the death area, has possibly brought to light the much searched for starting place of life? and that in fixing the chemical reaction of the final biologic poison, he has pointed to the chemical make-up of the first biologic pabulum? Reduced to prime essentials, the editorial was after some very definite cerebral anatomical structure upon which all other parts of the body are absolutely dependent; and then, was looking for a single biochemical product whose affinity for the vital structure, would overpower it. If science can contemplate a body as so going to its death, then science must think of a physiologic body, as so coming to life. The body had to be made very pathologic, before the writer could get it to destroy itself, and just so does a body have to become very physiologic, before it can take on life. And as a matter of fact that is precisely the course of the biologic process in utero. When, or at what particular stage of development life begins? does not matter. It is no easier for science to start life in protoplasm, than in a fully developed body. In either case the physiologic balance is the same as is the force of the mainspring when fully wound up, but with the pendulum hanging at vertical. Some other power must overcome the inertia of physiologic preparedness; and then as the swung out pendulum permits the escapement to register the first tick—just then and there, does life begin.

That power which brings about the physiologic perfection, is not life. Neither is life the force that swings the pendulum out of vertical. But life itself, is that which goes out of physiologic perfection, when the "acidosis" of the last toxin, paralyzes the respiratory center.

Just prior to the coming of the life-giving force, every biologic force of every bodily function is in nascent preparedness for the welcoming of life. And just as the ion of acidosis cuts life out of physiologic structure by its action upon the respiratory center—in the same way is life brought to the respiratory center by the ion of alkalinity.

THE HERITAGE OF DEGENERACY

Mrs. Grover Baker Eddy has been dead for several years. She died just as have all other women of her age, who had been suffering from similiar mental disease. The anemia of grandeur vagary acting upon senity. A bare statement of the self-evident common-place of life, and need not be discussed.

Vagaries are of necessity without the least foundation in fact. The only matter of scientific interest connected with the various vagaries that have in affinity gathered around the cloud of paranoiac illusions and hallucinations of Mrs. Eddy, is, the manifested power of superstitious instincts to follow the line of march from the past over into the present. Excepting as they are symptomatic of a psycho-pathology, the vagaries themselves are not of interest.

Inheritance is a big word. Inheritance is not though, the same power as is that of evolution. If inheritance compassed all of evolution, there could be no evolutionary progress. All of the past would come over, and the product of succeeding generations would simply be heredity multiplied. A quantity, but not a quality change. In some way, evolution sees to it that in the span of the ages—in the span of aeons there is surely somewhat less of the aberrant impulse in mankind, and that thus moment by moment the race does emerge from the stagnant waters of superstitious ineptness.

Superstition is as old as man. Ineptness never itself builds a bridge across a stream; and so far does the degeneracy carry indeed, that it even denies the existence of either bridge or stream, while traveling the roads of safety for which others have sacrificed toil and life. Just as in the ignoble distant past ineptness warmed nerveless useless hands over the fires that virility kindled, just so does degeneracy today paracite living and life giving things. This heritage of ineptness today—in the words of the old old couplet:

"Thrusts its fists against the post,"
"And still insists it sees a ghost."

The fact is that the very brain structure out of which come the incoherent vacuous reasonings of ineptness—that brain structure is itself evidence of the benefit to mankind of past and present martyrdom in the fields of hygienic and sanitary investigations, the need of which investigations the vaporings of degeneracy profess to ignore.

The different names that the various groupings of the degeneracy have taken on, are innumerable. To give ineptness a name, is merel ythe adding of nothing to nothing. No two pairs of normal eyes sees the same rainbow at the same time; and the psychology of the drawing power of a name is, that it meets the needs of a particular mental vacuity—it promises to get in a short-cut-something-for-nothing-way wished for things, before the task of which accomplishment the verveless mind quails. So it comes about that each particular name fits in best where there is the most complete ignorance regarding that for which the name would reasonably be supposed to stand. The psycho-pathology common to any group is indicated by the name under which it sails.

THE PROFESSION'S PATRIOTIC OBLIGATION.

A public speaker in an address recently expressed his burning belief in these words: "We will fight—we will fight Germany until if finally beaten there will be left for the victors but a desert covered with bones!"

That's patriotism. The speaker was really saying that we are going to win the fight. And we are. The expression is, however, one of sentiment, and war is not sentiment. We are past all that. War is a fact. It is the arraying of the hardest of facts against the hardest of facts.

The hard facts that concern physicians are the facts regarding physiology, psychology, and morality. There has never before been a time when physical, mental, and moral efficiency has meant so much as now. And the supreme obligation of the profession is to care for this trinity, that is to save the nation and the world.

In the most rigid exercise of this care sentiment must be given to the wind. Now, we must be the guardians of eternal law. Patriotism demands that the medical profession shall not wink at foolishness. There must be no thought about "Blue laws," now. Healthy physical, healthy mental, and healthy moral are but the compilations of eternal law expressed in human body terms. Upon the merical profession—more than upon any other class of our people—rests the obligation to care for this trinity that must fight the battles and save the nation, and thus save the world.

Law—just merely common sense law says that if we build for the best physical, the best mental, the best moral we will get that kind of a trinity. Law says too, that every bit of crippling we have done to this trinity in the past, will increase by exactly that much, the number of "bones" that victory is going to cost us. There is no use in the medical profession praying over the sowing of seed that has already been done. Law—the law of the harvest says we are going to reap just what we have sown.

The man in the penitentiary, the physical wreck from dissipation, the flotsam and jetsam of life are now seen to be worse than national burdens. They represent just so much of subtraction from our national life. Instead of having been an army of builders of national life in the past, and now an army of trained trustworthy patriotism fighting with the enthusiasm of true moral courage in France, they are a part of our national weakness. We see it now. We are now feeling the grip of eternal law. We can not undo the past. But finding out now exactly what is in accord with eternal law, and from this time on following that course, will make smaller the nation's pile of "bones."

The eternal law that physicians must now study and practice and teach is not in the least influenced by "conscience," "opinions," or by the "beliefs" of men. The law of gravitation does not change merely to suit the calculations of even skilled engineers woh may have figured out that the bridge will carry the load. The medical profession is up against unchangeable law; but physicians more than any other class of men, appreciate the importance of exercising the greatest care at the beginning of things. And there is our hope.

Physicians must understand now, that anything and every thing that lessens or impairs the physical; that renders less active and deepndable the mental; or that depraves the moral of the soldier reduces his efficiency. The medical profession was never before under so great obligation.

WHY ELECT THE ANATOMIST THE GOAT?

Dr. Leo Mayer in The Jr. A. M. A., March 23, 1918, undertakes to criticize the methods of teaching anatomy in this country on the basis that specialists in anatomy trouble themselves neither with the practical application of the facts nor with the shifting of essentials from non-essentials. In other words they are concerned more with the teaching of anatomy from the anatomist's point of view than teaching it from the point of view of the physician. This criterion may or may not be justified and again it may be directed to other subjects than anatomy. It would seem that physiologists as well as anatomists are concerning themselves at the present with this very problem. Scientists of the old school such as Huxley, Spencer, Tyndall and the like, were more omniverous in their interests and are curiously wanting in our present day higher instruction and learning with its ultraspecialism. Specialism seems, indeed, to confine the man to narrow limits of work, and to narrower limits of thought. Arbitrary lines are drawn closer and closer, and this not only holds for scientific men in academic or in practical lines of work but for our very medical men themselves. The specialist in fractures is not particularly interested or entertained in a discussion of the variety of shortening the round ligaments. He will lament the pitiful ignorance of the students on the relation of the muscle pull to displaced fragments while our friend the gynecologists will wax sarcastic at the expense of the anatomist for failure on the part of students to know the importance of the histology of the sacro-uterine ligament. The teaching of anatomy is something like learning a new vocabulary and sins have been committed in the extent of this vocabulary. Perhaps anatomists are demanding too much of their students, and then, too, perhaps they are trying to please too many other specialists. The nose man loves his ethmoidal labyrinth; the ear man his tympanic cavity; the eye man the relation of the retinal vessels to the fovea; the surgeon, the topography of the gall bladder; the chest expert, the bronchial lymphatic return; the gynecologist, the anatomy of the perineum; the obstetrician, the placental histology and fetal circulation. Why continue further Dr. Mayer's criticism is well taken but may not this criticism be extended to other subjects as well? Why elect the anatomist the goat?

EDITORIAL NEWS ITEMS

The largest military hospital of the kind in the world is now in process of construction in France. When completed it will have 20,000 beds. The British government has a hospital with 16,000 beds.

Dr. William Preston Parks, of Olin, Iredell County, died March 14th. Dr. Parks was 77 years old, having graduated at the Washington University School of Medicine in Baltimore in 1867. This school has been extinct for several years.

Dr. J. F. Moore, of Mooresville, N. C., was recently killed in an automobile accident. Dr. Moore has been an active practitioner of medicine in the Mayhew section of Iredell County, since his garduation from the North Carolina Medical College in 1899. He had the respect and confidence of the best people in his community. He received his license to practice medicine in 1895 and joined the State Medical Society in 1898.

The Azalea Hospital to be built by the government for the care and treatment of tubercular cases, is now in process of construction. The contract has been let to Gude & Co., of Atlanta, Ga., for the sum of $1,750,000. This ought to be the leading hospital of its kind in the United States.

Dr. W. R. Griffin, for several years member of the medical staff of the North Carolina State hospital, has resigned and will go to Asheville to take charge of the Appalachian Hospital. Dr. Griffin is a bright, young professional gentleman. He graduated from the Jefferson Medical College, Philadelphia, Pa., in 1910, and received his license to practice medicine in this state the same year. In 1913 he joined the State Medical Society.

Dr. J. B. Eubanks of Union County, N. C., died March 9th. The cause of the doctor's death was pneumonia. He was about fifty years old and for the past twenty-five years has been a prominent practicing physician in Union County.

Dr. Eubanks graduated at the University of Vanderbilt in 1887 and joined the North Carolina Medical Society in 1904. He was a professional gentleman who had the respect and confidence not only of the medical profession, but a very large circle of friends and admirers.

Dr. J. A. Stevens, a prominent physician at Clinton, N. C., died March 20th. Dr. Stevens was a good man and a good physician. He was popular and respected. He had been practicing medicine in Clinton for thirty-five years, having graduated at the Jefferson Medical College, in 1883. He received his license the same year to practice medicine in this state and also joined the State Medical Society the same year and has been an active member of that organization ever since. Five years ago he was made an honorary member.

It is understood from the Surgeon General's office at Washington that in line with its reorganization on a greater efficiency basis that the medical department of the army has released from services 1,050 medical officers. The discharges are classified as follows: Physical disability, 411; inaptitude for the service, 154; to join other branches of service, 306; domestic difficulties, 59; resignation, 88; needed by communities, hospitals, schools, etc., 32; total, 1,050. During the same period there have been 2,265 promotions of medica lreserve officers, including some officers promoted more than once. The discharges are in addition to about 4,000 rejections of applicants, 21,740 having been accepted and recommended to the Adjutant General's office for commissions, and of these 13,687 were on active duty on February 23rd. The officials of this department seem to be determined to put the Medical Department on the highest plane possible by elimination of all those who are unfit for actual service.

The International Surgical Society held a meeting in Paris on November 3, 1917, with a great many delegates to this society from Belgium, France, Great Britain, Serbia and the United States of America. They passed the following resolution that: (1) The International Surgical Society be dissolved after the publication of the Volume of Transactions of the meeting held at New York City, April 14, 1914. Should any money remain after the publication of the volume, such money will be divided pro rata among members. Each member of the Austro-German group will receive his share; but the money belonging to members from other nations will be retained and applied to some object of scientific reparation in Belgium. (2) A new society will be created after the war on a similar basis, to be called the "Inter-Allied Surgical Society." Surgeons of neutral countries may also be elected members.

Headache and Neuralgia.

Is there anything more harmlessly comforting in these painful conditions than K-Y Analgesic, locally applied?

"Sick headache," "bilious headache," and just "plain headache" are usually relieved when K-Y Analgesic is properly employed.

The local use of K-Y Analgesic does not in the least take the place of, or interfere with, any treatment looking to the removal of the cause of the headache. Rather, K-Y Analgesic is simply a useful adjunct to general treatment.

K-Y Analgesic is not a panacea—it is simply a safe, non-greasy, local anodyne, remarkably effective within its rational limitations.

Samples will be forwarded to physicians on request to Johnson & Johnson, Van Horn & Sawtell Dept., 15-17 East 40th St., New York City.

The Carolina Hotel, Pinehurst, N. C.

This hotel illustrated above will be headquarters for the approaching meeting of the North Carolina Medical Society, which meets April 16-17 and 18th.

This is one of the best tourist hotels in the South, and we predict that this meeting of the society will be taken care of and intertained in the best of style. The environments are beautiful and the accommodations ample. The members of this society ought to feel congratulated that they are to meet in this beautiful hotel this year. Not many of the physicians of this state have had the privilege and pleasure of seeing Pinehurst, which is a little fashionable city that caters mainly to the better class of tourists of the north that come south during the cold winter months to spend a few months. This resort merits the fine reputation that it has.

The program for the coming meeting is attractive and full of interest. All the circumstances connected with this meeting point to success.

TENTATIVE PROGRAMME

Sixty-Fifth Annual Meeting Medical Society of the State of North Carolina, Pinehurst, Tuesday, Wednesday Thursday, April 16, 17, 18, 1918, 10 a. m.

North Carolina Public Health Officers' Association, Eighth Annual Session Monday, April 15, 1918, 9:30 a. m., Pinehurst.

FOREWORD.

Members are requested to see that their names and the titles of their papers are properly recorded. Where mistakes have occurred notify the Secretary at once. Also send in your name to discuss papers, and if unwilling to open the discussion assigned, give notice to that effect, that corrections may be made in final program. Remember that no name appearing elsewhere on the program is assigned to open a discussion; no person is to open more than one discussion.

HOW TO REACH PINEHURST.

Asheville

Leave via Charlotte and Hamlet 6:30 a. m.
Arrive Pinehurst ....10:30 p. m.
Leave via High Point and Asheboro .... 6:00 a. m.
Arrive Pinehurst .... 6:27 p. m.

Charlotte

Leave via N. S. Ry .... 6:30 a. m.
Arrive Star .... 9:35 a. m.
Leave Star (ex. Sunday)......10:10 a. m.
Arrive Pinehurst .... 1:00 p. m.
Leave Charlotte via S. A. L. Ry. 5:00 p. m.
Arrive Pinehurst ....10:30 p. m.

Goldsboro

Leave via Raleigh and Aberdeen 9:45 p. m.
Arrive Pinehurst .... 7:30 a. m.
Leave Goldsboro .... 6:45 a. m.
Arrive Pinehurst ....12:00 M.
Leave Goldsboro .... 2:00 p. m.
Arrive Pinehurst ....10:30 p. m.
(See also service via Southern Ry. and S. A. L. Ry.)

Greensboro

Leave via Southern Ry.........12:20 p. m.

Arrive Pinehurst via Sanford & Aberdeen .... 8:05 p.m.
Leave via Southern Ry. .... 2:00 p.m.
Arrive via Raleigh and Aberdeen 8:05 p.m.

Wilmington

Leave via S. A. L. and N. S. Ry 5:00 a.m.
Arrive Pinehurst ....10:25 a.m.
Leave via same route.......... 3:55 p.m.
Arrive Pinehurst ....10:40 p.m.

Winston-Salem

Leave via Southern Ry.........11:20 a.m.
Arrive Pinehurst via Greensboro, Sanford and Aberdeen.... 8:05 p.m.
Leave via Southern Ry.........11:20 a.m.
Arrive Pinehurst via Greensboro and High Point .... 6:27 p.m.

For further information address Pinehurst General Office, Pinehurst, N. C., or your ticket agent.

HOTEL RATES

Carolina.

Room without bath ,including board for one	$ 4.00
Room with bath, including board for one	7.00
Room without bath, including board for two	7.00
Room with bath, including board for two	10.00
Two rooms with bath between, including board for two	13.00
Two rooms with bath between, including board for four	19.00

Holly Inn

Room without bath, including board for one	$ 3.00
Room with bath, including board for one	6.00
Room without bath, including board for two	6.00
Room with bath, including board for two	9.00

NORTH CAROLINA HEALTH OFFICERS' ASSOCIATION.

Eighth Annual Session, Pinehurst, Monday, April 15, 1918.

Dr. D. C. Absher, President, M. R. C., U. S. Army.

Dr. M. T. Edgerton, Vice-President, M. R. C., U. S. Army.

Dr. G. M. Cooper, Secretary-Treasurer, Raleigh.

Program—9:00 a. m.

1. Prayer—Dr. L. B. McBrayer, Sanatorium.
2. President's Annual Address—Dr. D. C. Absher, First Lieutenant United States Army Medical Corps.
3. Report of Secretary and Treasurer—Dr. G. M. Cooper, Raleigh.
4. Appointment of: (a) Auditing Committee; (b) Committee on Resolutions.
5. Developing County Health Work—Dr. K. E. Miller, U. S. P. H. Service, Acting County Health Officer, Tarboro.
6. Quarantine—Dr. S. A. Stevens, Union County Physician, Monroe.
7. "Interesting the Public in Health Work"—Dr. B. K. Hays, Secretary North Carolina Medical Society, Oxford.
8. Discussion.

1:00 p. m.

Free automobile transportation from Pinehurst to State Sanatorium, where afternoon session will be held at 3 p. m., in auditorium of Sanatorium.

Reports (not exceeding 500 words) will be read from all county and city health officers. Reports will be called by alphabetical list of counties.

8:00 p. m.—Hotel Auditorium, Pinehurst.

1. Getting Defective School Children Treated—Dr. Geo. W. Shipp, Catawba County Physician, Newton.
2. Conservation Through Care for Defective School Children (with special reference to facts learned through examination of 1,000 men for Draft Army)—Dr. Z. M. Caviness, Wake County Physician, Raleigh.
3. Discussion.
4. What the State Laboratory of Hygiene Does to Help the Doctor—Dr. C. A. Shore, Director, Raleigh.
5. Reports of Committees.
6. Adoption of Resolutions.
7. Election of Officers.
8. Adjournment.

PROGRAM.

Medical Society of the State of North Carolina Officers 1917-1918.

Dr. I. W. Faison, President, Charlotte.

Dr. Wm. DeB. MacNider, First Vice-President, Chapel Hill.

Dr. Joseph B. Greene, Second Vice-President, Asheville.

Dr. Ben F. Royal, Third Vice-President, Morehead City.

Dr. Benj. K. Hayes, Secretary, Oxford.

Dr. Wm. M. Jones, Treasurer, Greensboro.

Councillors 1916-1919.

First District—Dr. J. L. Spruill, Columbia.

Second District—Dr. K. P. B. Bonner, Morehead City.

Third District—Dr. Ernest Bulluck, Wilmington.

Fourth District—Dr. M. M. Saliba, Wilson.

Fifth District—Dr. Ben Hackney, Bynum.

Sixth District—Dr. A. C. Campbell, Raleigh.

Seventh District—Dr. J. E. S. Davidson, Charlotte.

Eighth District—Dr. J. M. Ring, Elkin.

Ninth District—Dr. M. R. Adams, Statesville.

Tenth District—Dr. C. V. Reynolds, Asheville.

Chairmen of Sections.

Practice of Medicine—Dr. John Whitehead, Salisbury.

Surgery—Dr. L. W. Kornegay, Rocky Mount.

Gynecology—Dr. C. M. Strong, Charlotte.

Pediatrics—Dr. A. S. Root, Raleigh.

Health and Education—Dr. C. V. Reynolds, Asheville.

Physiology and Chemistry—Dr. L. H. Webb, Chapel Hill.

Pathology and Bacteriology—Dr. T. M. West, Fayetteville.

Anatomy—Dr. G. A. Aikin, Wake Forest.

Obstetrics—Dr. J. G. Blount, Washington.

Materia Medica and Therapeutics—Dr. Chas. W. Moseley, Greensboro.

Eye, Ear, Nose and Throat—Dr. J. B. Wright, Raleigh.

TUESDAY, APRIL 16—10:00 A. M.

Ball Room, Carolina Hotel.

1. Call to Order—Dr. L. B. McBrayer, Chairman Committee of Arrangements, Sanatorium.
2. Prayer—Rev. J. T. Gardner, Southern Pines.
3. Addresses of Welcome:
    “Mine Host”—Mr. Leonard Tufts.
    On behalf of the Moore County Medical Society—Dr. A. McNiel Blair.
    On Behalf of the Sandhill Section—Hon. R. N. Page.
4. Response to Addresses of Welcome—Dr. F. R. Harris, Henderson.
5. The President's Annual Address—Dr. I. W. Faison, Charlotte.
6. Report of Committee on Arrangements.
7. Report of Special Committees.
8. Announcements.

TUESDAY MORNING, APRIL 16.

Ball Room, Carolina Hotel.

DISEASES OF CHILDREN.

Dr. A. S. Root, Chairman, Raleigh.

1. “Diseases That Can With Assurance Be Referred to Absence of, or Derangement With, Functions of the Ductless Glands”—Dr. A. A. Root, Chairman, Raleigh. Discussion opened by Dr. Thomas McCrae, Philadelphia.
2. “The Intestinal Diseases of Children.” (To be discussed with the following).
3. “Diarrhoeal Diseases of Infancy—Their Causation, Complications and Treatment”—Dr. Charles Roberson, Greensboro. Discussion opened by Drs. T. L. Booth and J. E. Tidwell.
4. “Causes of Sudden Death in Infancy”—Dr. L. W. Elias, Asheville. Discussion opened by Drs. B. G. Allen and J. E. Hobgood.
5. Tetany and Rickets—Modern Information Regarding These”—Dr. Yates W. Faison, Charlotte. Discussion opened by Drs. R. B. Hayes and Clara E. Jones.
6. “Congenital Syphilis”—Dr. J. B. Sidbury, Wilmington. Discussion opened by Drs. L. G. Beall and B. W Page.

TUESDAY MORNING, APRIL 16.

Moving Picture Building.

SECTION ON ANATOMY.

Dr. G. Alfred Aikin, Chairman, Wake Forest.

1. “Kidney with an Inferior Artery Entering Apex.”
    “Complete Transposition of Abdominal and Thoracic Vicera.”
    “Styloid Process Reaching Hyoid Bone”—Dr. G. Alfred Aikin, Wake Forest.

TUESDAY MORNING, APRIL 16.

Moving Picture Building.

SECTION ON PATHOLOGY AND BACTERIOLOGY.

Dr. T. M. West, Chairman, Fayetteville.

1. “Pathologic Lesions of Bone as Demonstrated by the X-Ray”—Dr. L. R. Pittman, Fayetteville. Discussion opened by Dr. R. P. Noble.
2. “Pathology and Treatment of Chronic Gonorrhoea”—Dr. C. O. Abernathy, Raleigh. Discussion opened by Dr. T. V. Goode.

TUESDAY AFTERNOON, 2:30.

Ball Room, Carolina Hotel.

SECTION ON THE PRACTICE OF MEDICINE.

Dr. John Whitehead, Chairman, Salisbury.

1. “Acidosis”—Dr. John Whitehead, Chairman, Salisbury. Discussion opened by Drs. J. L. Adams and R. N. Duffy.
2. “Assumptions in Medicine—Their Prevalence and Dangers”—Dr. Chas. L. Minor, Asheville. Discussion opened by Drs. J. F. Sanderford and D. D. Carroll.
3. “The Existence of Tropical Sprue in North Carolina”—Dr. Edward J. Wood, Wilmington. Discussion opened by Drs. J. R. Ashe and H. B. Hiatt.
4. “Malaria—The Effects of its Toxin on the Kidney”—Dr. F. C. Strosnider, Goldsboro. Discussion opened by Drs. H. T. Moore and J. H. Harper.
5. “Lagrippe—With Special Study of its Sequallae”—Dr. Leroy Highsmith, Fayetteville. Discussion opened by Drs. G. S. Watkins and J. W. Peacock.
6. “Pleurisy”—Dr. P. P. McCain, Sanatorium. Discussion opened by Drs. W. L. Taylor and S. D. Craig.
7. “Reviews of the Recent Advances in the Early Diagnosis of Pneumonia”—Dr. Harvey P. Barret, Charlotte. Discussion opened by Drs. B. M. Meriweather and L. F. Magruder.
8. “The Value of Leucocytosis in the Diagnosis and Treatment of Diseases”—Dr. E. C. Privett, Charlotte. Discusison opened by Drs. J. C. Wiggins and J. C. Raby.
9. “The Clinical Relation of Systolic and Diastolic Blood Pressure in Certain Circulatory Conditions”—Dr. H. H. Newman, Salisbury. Discussion opened by Drs. P. R. Hardee and E. P. Gray.
10. “The General Practitioner and Tuberculosis”—Dr. M. E. Street, Glendon. (To be discussed with the following.)
11. “Artificial Pneumothorax and War Cases

of Tuberculosis"—Dr. Mary E. Lapham by Drs. R. T. Upchurch and C. W. Mimms.

12. "Angioneurotic Edema, a Cause of Hydrothorax, with Report of a Case"—Dr. Ben H. Hackney, Bynum. Discussion opened by Drs. E. S. Boice and C. W. Sutton.

13. "The Past, Present and Future of Medicine"—Dr. F. E. Ashbury, Ashboro. (To be discussed with the following.)

14. "Present Medical Conditions in North Carolina"—Dr. H. D. Stewart, Monroe. Discussion opened by Dr. J. M. Templeton.

15. "The Relation of the General Practitioner to the More Common Nervous Diseases"—Dr. J. P. Monroe, Charlotte. Discussion opened by Drs. W. W. Johnston and W. B. Bullock.

16. "Hookworm Disease, its Prevalence, Importance, Treatment and Prevention"—Dr. J. S. Mitchener, Kinston. Discussion opened by Drs. J. W. Hooper and E. B. Beasley.

17. "Amoebic Dysentery"—Dr. A. J. Warren, Hillsboro. Discussion opened by Drs. B. C. Willis and H. H. Newman.

TUESDAY AFTERNOON, APRIL 16
2:30 O'CLOCK.
Moving Picture Building.

SECTION ON SURGERY.

Dr. L. W. Kornegay, Chairman, Rocky Mount.

1. "Carrel-Dakin Solution and Paraffin Dressings in Certain oCnditions"—Dr. L. W. Kornegay, Rocky Mount. Discussion opened by Drs. W. D. Jones and J. A. Speed.

2. "Fulguration for Intra Vesical Neoplasms"—Dr. Albert D. Parrott, Kinston.

3. "Traumatic Brain Surgery in Civil and Military Practice."—Maj. John W. Long, Greensboro. Discussion opened by Drs. A. T. Pritchard and Albert Parrott.

4. "Diagnosis and Treatment of Ureteral Calculi"—Dr. A. J. Crowell, F. A. C. S., and Dr. S. R. Thompson, Charlotte.

5. "The Improvement in Suprapubic Prostatectomy"—Dr. E. T. Dickinson, Wilson.

6. "Hospital Economics"—Dr. C. D. Hill, Durham.

7. "Report of Case of Strangulation of Diverticular in Hernail Sac"—Dr. Eugene B. Glenn, Asheville.

8. "Typhlitis-Appendicitis, with Report of Some Interesting Cases"—Dr. J. M. Wallace, Concord.

9. "Strongyloides Intestinalis"—Dr. H. F. Long, Statesville.

10. "Secondary Operations in the Abdomen"—Dr. George W. Pressly, Charlotte.

11. "Significance of the Sigmoid Adhesion"—Dr. H. A. Royster, Raleigh.

12. "Subtotal Hysterectomy Indications and Technique"—Dr. Lyle S. Booker, Durham.

13. "Transfusion of Blood"—Dr. L. A. Crowell, Lincolnton.

14. "On the Surgical Aspects of Toxic Goiter"—Dr. N. D. Bitting, Durham.

15. "Report of an Interesting Case of Exophthalmic Goiter"—Dr. Foy Roberson, Durham.

16. "Appendicitis in Children"—Dr. J. F. Highsmith, Fayetteville.

17. "Some Suggestions on the Administration of Anaesthetics"—Dr. J. C. Montgomery, Charlotte.

18. "The Present Status of Gall-bladder Surgery"—Dr. J. W. Tankersley, Wilmington.

19. "Carbon Dioxide Ice: An Adjunct to the Surgeon's Armamentarium"—Dr. Ben. F. Royal, Morehead City.

TUESDAY AFTERNOON, APRIL 16.
5:00 O'CLOCK.
Moving Picture Building.

Lecture on War Surgery. Illustrated with Moving Pictures—Col. W. O. Owen, Washington, D. C.

SPECIAL WAR SESSION
TUESDAY NIGHT, 8:00 O'CLOCK.
Ball Room, Carolina Hotel.

Maj. John W. Long, Chairman, Greensboro.

1. "Volunteer Medical Service Corps"—Dr. Cyrus Thompson, Jacksonville.

2. Presentation of Service Flag.—Dr. L. B. McBrayer, Sanatorium.

Service Flag Accepted by Maj. Chas. O'H. Laughinghouse, Fort Oglethorpe.

3. "The Relation of the Medical Profession to the Army."—Col. Robert E. Noble, Washington, D. C.

Address, Gov. T. W. Bickett, Raleigh.

WEDNESDAY MORNING, APRIL 16,
9:00 O'CLOCK.
Ball Room, Carolina Hotel.

SECTION ON PUBLIC HEALTH AND EDUCATION.

Dr. C. V. Reynolds, Chairman, Asheville.

1. "Protecting Physicians in the Administration of Public Health Laws"—A. McR. Crouch, M. D., Raleigh. Discussion opened by Drs. John Thames and E. F. Long.

2. "What I Have Been Instrumental in Accomplishing in Eight Months as a Whole-time Health Officer"—F. M. Register, M. D., Tillery. Discussion opened by Drs. E. F. Strickland and J. S. Mitchener.

3. "What Public Health Owes to the Infant"—L. W. Elias, M. D., Asheville. Discussion opened by Drs. N. C. Daniel and W. P. Webb.

4. "Pellagra"—Dr. Joseph Goldberger, U. S. P. H. and M. H. S., Washington, D. C.

CONJOINT SESSION
WEDNESDAY, APRIL 17, 12 O'CLOCK

Conjoint Session of the Medical Society of the State of North Carolina and the North Carolina State Board of Health.

Members State Board of Health.

Dr. J. Howell Way, President, Waynesville.

Dr. Richard H. Lewis, M. D., LL. D., Raleigh.
J. C. Ludlow, C. E,, Winston-Salem.
Edward C. Register, Charlotte.
Dr. Thomas E. Anderson, Statesville.
Dr. Chas. O'H. Laughinghouse, Greenville.
Dr. Edward J. Wood, Wilmington.
Dr. F. R. Harris, Henderson.
Dr. Cyrus Thompson, Jacksonville.

Executive Staff State Board of Health.

W. S. Rankin, M. D., Secretary and Treasurer.

C. A. Shore, M. D., Director State Laboratory Hygiene.

Warren H. Booker, C. E., Chief Bureau Engineering and Education.

J. R. Gordon, M. D., Chief Bureau iVtal Statistics.

L. B. McBrayer, M. D., Superintendent State Sanatorium.

Geo. Cooper, M. D., Chief Bureau Rural Sanitation.

Miss Mary Robinson, Bookkeeper.

Order of Business.

1. Report of Work Accomplished and Recommendations.
2. Discussions.
3. Election of Officers.
4. New Business.
5. Adjournment.

WEDNESDAY MORNING, APRIL 17, 9:30 O'CLOCK.

Moving Picture Building.

SECTION ON GYNECOLOGY.

Dr. C. M. Strong, Chairman, Charlotte.

1. "Conservation of our Women During and Following the Great War"—Dr. C. M. Strong, Charlotte. Discussion opened by Drs.

2. "Prognosis and Treatment of Uterine Cancer. Illustrated"—Dr. William S. Gardner, Baltimore. Discussion opened by

3. "Radium in Cancer"—Dr. J. P. Monroe, Sanford. Discussion opened by

4. "Syphilis of the Uterus"—Dr. Oren Moore, Charlotte. Discussion opened by

5. "Care of Post Perineorrhaphy."—Dr. T. W. West, Fayetteville. Discussion opened by

6. "Cause and Treatment of Backache in Women"—Dr. Wylie Moore, Charlotte.

7. "Abdominal Caesarean Section, with Case Reports"—Dr. Moir S. Martin, Mount Airy.

WEDNESDAY MORNING.

Ball Room, Holly Inn.

SECTION ON EYE, EAR, NOSE AND THROAT.

Dr. J. B. Wright, Chairman, Raleigh.

1. "Oesophageal Stricture"—Dr. J. B. Wright, Raleigh.

2. "Adenoids in Children. A Review of the Lymphatic Circulation of the Pharangeal Region"—Dr C. M. Peeler, Charlotte.

3. "Cataract Accidents"—Dr. J. G. Johnston, Charlotte.

4. "Acute Mastoiditis"—Dr. H. M. Bonner, Raleigh.

5. "The Infections Seen in Acute and Chronic Throats"—Dr. John Hill Tucker, Charlotte.

WEDNESDAY AFTERNOON, 2:30.

Ball Room.

SECTION ON OBSTETRICS.

Dr. John G. Blount, Chairman, Washington.

1. "The Frequency of Retroflection of the Uterus Following Labor, its Causation, Prevention and Treatment."—Dr. John G. Blount, Washington.

2. "Uses and Abuses of Forceps and Pituritin"—Dr. C. N. C. Mills, Charlotte.

3. "Rural Obstetrics"—Dr. M. T. Frizzelle, Ayden.

4. "The Midwife Problem"—Dr. G. H. Macon, Warrenton.

WEDNESDAY AFTERNOON, 5:00 P. M.

HORSE RACING.

WEDNESDAY NIGHT, 8:00 O'CLOCK.

Moviing Picture Building.

1. "Tuberculosis and War"—Dr. C. L. Minor, Asheville.

2. "Medicine in a War Hospital"—Dr. Thomas McCrae, Philadelphia.

3. "The Control of Venereal Diseases in Extra aCntonment Zones"—Maj. B. W. Browne, Camp Greene, Charlotte.

4. "Observations Regarding Surgery of the Brain and Spinal Cord"—Dr. William Sharpe, New York City.

5. "Dichloramine-T, the Newest War Antiseptic"—Capt. Walter Lee, Philadelphia.

6. "The Cause and Prevention of the Kidney Injury in Acute Bichloride Poisoning"—Dr. Wm. DeB. MacNider, Cahpel Hill.

7. "The Value of X-ray in iDagnosing Gastro-Intestinal Disorders"—Dr. Robert H. Lafferty, Charlotte.

THURSDAY MORNING, APRIL 18

Ball Room, Carolina Hotel.

SECTION ON MATERIA MEDICA AND THERAPEUTICS.

Dr. Chas. W. Moseley, Chairman, Greensboro.

1. "The Use of Solidified Carbon Dioxide in the Removal of Benign and Malignant Growths of the Skin"—G. H. Sadelson, M. D., Charlotte.

2. "Vaccines and Antitoxines"—Harold H. Newman, Salisbury. Discussion opened by Drs. Foy Roberson and W. H. Furman.

3. "Care and Treatment of Neurasthenics." —John Q. Myers, M. D., Charlotte. Discussion opened by Drs. John Spicer and S. H. Canady.

4. "Personal Experience with the Allen Treatment of Diabetes"—Dr. Parran Jarboe, Greensboro. (To be discussed with the following:)

5. "The Modern Management of Diabetes Mellitus"—F. M. Hanes, Winston-Salem. Dis-

cussion opened by Drs. M. S. Martin and S. W. Rankin.

6. "The Therapeutic Value of Rest in the Management of Tuberculosis"—Dr. W. H. Sherrill, Sanatorium.

7. "Institutional Treatment and After are of Drug Addicts"—Dr. W. C. Ashworth, Greensboro.

Report of Obituary Committee.

BOOK NOTICES

Progressive Medicine, a Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences, Edited by Hobart Amory Hare, M. D., Professor of Therapeutics, Materia Medica, and Diagnosis in the Jefferson Medical College Hospital; One-time Clinical Professor of Diseases of Children in the University of Pennsylvania; Member of the Association of American Physicians, etc., Assisted by Leighton F. Appleman, M. D., Instructor in Therapeutics, Jefferson Medical College, Philadelphia; Ophthalmologist to the Frederick Douglass Memorial Hospital and to the Burd School; Associate in Ophthalmology, Philadelphia Polyclinic Hospital and College for Graduates in Medicine. Volume 1, March, 1918. Surgery of the Head, Neck and Breast—Surgery of the Thorax, excluding Diseases of the Breast—Infectious Diseases, Including Acute Rheumatism, Croupous Pneumonia and Influenza—Diseases of Children—Rhinology, Laryngology and Otology. Lea & Febiger, Philadelphia and New York, 1918.

The third edition of Wright's Guide to the Organic Drugs of the U. S. P. is just off the press and ready for distribution. This convenient reference book, now in its seventieth thousand, contains brief mention of the more important facts concerning the origin, properties and uses of official organic drugs, as well as those of the third revision of the National Formulary.

Other information of useful character contained in its 220 pages, printed on thin paper, refer to plant families, botanical and therapeutical terms, index of plant names, poisons and antidotes, Centigrade and Fahrenheit thermometer scale comparisons, phrases and abberviations in abbreviations in prescription writing, Latin genetive case endings, symbols and signs used in prescription writing, metric system of weights and measures and table of equivalents.

This handy compendium is bound in leather and fits nicely in the vest pocket. It is one of those convenient references that becomes indispensable to both student sof medicine and physicians in practice after its usefulness is demonstrated. Wright|s Guide is published by Eli Lilly & Company and will be sent postpaid to our readers on requests accompanied by twenty-five cent sin stamps or coin addressed to Eli Lilly & Company, Dept. F., Indianapolis, Ind. This nominal cost, we are assured, barely covers the cost of printing, binding and postage.

A Pocket Formulary, by Quin Thornton, M. D., Assistant Professor of Materia Medica in the Jefferson Medical College, Philadelphia. Eleventh Edition, Revised. Lea & Febiger, Philadelphia and New York. Price, $2.00.

The eleventh edition of this Pocket Formulary is possibly more complete than any of the preceding editions. It contains 292 pages. The constant progress of therapy necessitates frequent revision of all the writings pertaining to that subject. Latterly the value of salvarsan, human blood-serum, antimeningitis serum, curative sera of several kinds, bacterial vaccines, and of a number of other remedies has been established, and therefore given proper recognition in appropriate places in the Formulary.

The arrangement of the text has been planned to conduce to the greatest convenience. Diseases are arranged alphabetically, and under each are given what are believed to be the most efficacious prescriptions for simple cases as well as for the various stages and complications. A special feature of this work, and one which is thought to add much to its value, is found in the indications and annotations as to the use of each formula. Except when specially mentioned, the quantities in each prescription are given in amounts suitable for adults, and are expressed both in the apothecaries' and metric system of weights and measures. Following the tendency of modern medicine, attention has been paid to palatability and pharmaceutical elegance, without sacrifice of therapeutic efficacy.

This little volume is not intended to replace individual thought on the part of the practitioner, whose diagnosis of each case must govern the character, quantity, combination, and method of administering the remedies selected. That there is a broad and legitimate field of usefulness for works of this character is self-evident, for even the best informed physicians may at times overlook an appropriate drug, and a young physician will perform his duty better, both to his patient and to himself, if he has at hand the collective experience o fthe profession. It always gives us pleasure to look over these little volumes representing different revisions of the book.

Transactions of the American Pediatric Society, Twenty-Ninth Session, Held at the Greenbrier, White Sulphur Springs, W. Va., May 28, 29 and 30, 1917. Edited by Oscar M. Schloss, M. D., Volume XXIX.

The annual volume of the transactions of this association is always received at this office with interest and pleasure. This volume is handsomely bound, containing 255 pages and is well edited and well indexed. It has many beautiful illustrations. The photograph of the members that were present at the White Sulphur Springs meeting in 1917 is an attractive object of the volume. It contains several familiar faces that are well known throughout this country.

Medical War Manual No. 4, Authorized by the Secretary of War and Under the Supervision of the Surgeon-General and the Council of National Defense. Military Orthopaedic Surgery, prepared by the Orthopaedic Council, Illustrated. Lea & Febiger, Philadelphia and New York, 1918. Price, $1.50.

In the preparation of a manual for military use, it seemed to the authors that it was wise from every standpoint to profit from the experiences of our allies.

In this little volume, they have quoted, by permission of course, from the writings of Col. Sir Robert Jones, who is a recognized authority in dealing with subjects of this kind, having had immense experience. The chapter on the prophylaxis of the foot is excellent and by permission has been quoted from Dr. Munston's writings. Every medical officer in our army should have one of these little books for constant and everyday reference.

A Text-Book of the Practice of Medicine, Thirteenth Edition Thoroughly Revised. A Text-Book of the Practice of Medicine, by James M. Anders, M. D., Ph. D., LL. D., Professor of Medicine and Clinical Medicine, Medico-Chirurgical College Graduate School, University of Pennsylvania, Thirteenth Edition Thoroughly Revised with the Assistance of John H. Musser, Jr., M. D., Associate in Medicine, University of Pennsylvania. Octavo of 1259 Pages, Fully Illustrated. Philadelphia and London: W. B. Saunders Company, 1917. Cloth, $6.00 net; Half Morocco, $7.50.

The present edition of this work is the product of the close and thorough revision of the previous or twelfth issue. Effort has not been spared to bring every portion of the volume up to date, the while being heedful of the needs and interests of both the practitioner and student. Most attention has been devoted to the more practical aspects of medicine, to symptomatology, diagnosis, including etiology and treatment, thus attempting to make manifest disease at the bedside in its many relationships, and, so far as possible, to trace the connection between the clinical features and their pathologic causes.

Much matter has been added—e. g., on Treatment of Tetanus, Acidosis (in Diabetes), Chylothorax, on Etiology of Aortic Incompetency, Treatment of Asthma, Diverticulitis, Functional Tests of Heptic Insufficiency, Gaucher's Disease, Estimation of Renal Function, Anaphylaxis of Food Intoxication, the Pneumococcic Infections, Focal Sepsis, Rat-bite Fever, Febris Wolhynica, and Pyorrhea Alveolaris. The following subjects have been rewritten: Prophylactic Vaccination, Specific Therapy in Typhoid Fever, Specific Therapy in Tuberculosis, Pellagra (Nutritional Disorder), Splenic Anemia, the Arrhythmias, Intestinal Toxemia, Bacteriology of Whooping-cough, Hemolytic Jaundice, and the section on Diseases of the Nervous System. Not a few subjects have found new places with a view to meeting the demands of the most modern and approved classification of disease. It is believed that without impairment of the intrinsic value of the book, but rather distinct gain to the reader, the description of certain complaints whose incidence has materially declined has been abridged so as to permit of a fuller discussion of other affections and conditions which have recently attracted an increasing share of professional attention. In the main, however, the same systematic and, it is believed, convenient arrangement of the subject matter has been followed in this as in previous editions.

A few diagnostic tables have been added. These have been found highly useful alike to the student and practitioner of medicine, economizing the time of both by reason of greater brevity and lucidity, in aiming to obtain a working knowledge in a practical form of the contrasting features between disease that may present points of great similarity at the bedside.

A satisfactory diagnosis is based, as a rule, upon an appeal to general pathology or morbid physiology, to the clinical laboratory and physical diagnosis, as well as to recognized causative factors, both predisposing and exciting, of disease. This is the only method by which real advancements in the study and recognition of disease are possible, and it is the one that has been adopted in the preparation of the present volume.

To review a volume like this, is certainly an opportunity that is appreciated. When I was a teacher in a medical school, I adopted Anders Practice of Medicine as a text-book on the practice of medicine and on account of this fact, I am glad to say that it is still in the opinions of many of the old students, their principal guide in the practice of medicine.

Neurosyphilis, Modern Systematic Diagnosis and Treatment, Presented in One Hundred and Thirty-Seven Case Histories, by E. E. Southard, M. D., Sc. D., Bullard Professor of Neuropathology, Harvard Medical School; Pathologist, Massachusetts Commission on Mental Diseases; Director, Psychopathic Department, Boston State Hospital; Vice-president American Medico-Psychological Association, and H. C. Solomon, M. D., Instructor in Neuropathology and in Psychiatry, Harvard Medical School; Special Investigator in Brain Syphilis, Massachusetts Commission on Mental Diseases; Acting Chief-of-Staff, Psychopathic Department, Boston State Hospital, with an Introduction by James Jackson Putnam, M. D., Professor Emeritus of Diseases of the Nervous System, Harvard Medical School, by Vote of the Trustees of the Boston State Hospital, Monograph Number Two, of the Psychopathic Hospital, Boston, Massachusetts, Boston, W. Leonard, Publisher, 1917.

This book was written primarily for the general practitioner and secondarily for the syphilographer, the neurologist, and the psychiatrist. The authors drew their conclusions chiefly from their experience in psychopathic hospitals, that modern type of institution in which the mental problems of general medical practice come to a diagnostic head weeks, months, or years before the asylum is thought of.

For many generations the study of psychology in connection with every deviation of the normal mentality has been recognized as a very important proposition. The reviewer once asked the head of a great insane asylum, when looking over one of his annual reports, as to the cause of insanity. I was surprised that his opinion was that syphilis was the direct or indirect cause of only a very small per cent of cases of some of the numerous forms of insanity. His conclusions on this point, I feel confident was an error, because syphilis enters into many cases of insanity. Now, there is no debate about this statement. Any one who is at all interested in the relationship between insanity and syphilis should certainly read this very valuable book. It is the best that I know of now on the market.

The authors of this book have had an abundance of material and study on which to base their conclusions. They have painstakingly and intelligently analyzed more than two thousand cases of syphilis of the nervous system, including over a hundred autopsies of all of the types of this disease. Every practicing physician should be interested in this book and it should be read and studied not only by the neurologist, but it should be read by the surgeon and general practitioner as well. The volume is a handsome one, properly indexed and contains 496 pages.

The Effective Treatment of Burns.

The conspicuous results obtained with the paraffin treatment in France have created a demand for a dependable preparation in this country. Accordingly Redintol has been prepared and placed at the service of American physicians.

Applied according to directions Redintol promptly relieves burning and smarting. Healing proceeds rapidly with the great advantage that scarring and contractions are reduced to a minimum. Redintol, therefore, opens up new and far reaching possibilities in the treatment of burns, and enables the practitioner to accomplish results that he has rarely if ever been able to obtain with the other measures at his command.

Samples and full directions to physicians on request to Johnson & Johnson, New Brunswick, N. J.

A Manual of Clinical Diagnosis, by Means of Laboratory Methods for Students, Hospital Physicians and Practitioners, by Charles E. Simon, B. D., M. D., Professor of Clinical Pathology and Physiological Chemistry in the University of Maryland Medical School and the College of Physicians and Surgeons, Baltimore, Maryland. Ninth Edition, Enlarged and Thoroughly Revised. Illustrated with 207 Engravings and 28 Plates. Price $6.00. Lea & Febiger, Philadelphia and New York, 1918.

The 207 engravings and the 28 plates are as attractive and as appropriate as any that I have ever seen in a book of this character. They are invaluable in a book of this kind. With a few exceptions it looks like the science of diagnosis has reached its maximum, and we predict this standard work with a clinical diagnosis will remain as a standard text-ook in this branch of our science for many years to come. The book contains 851 pages including the index. The price is $6.00.

International Clinics, a Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Paediatrics, Obstetrics, Gynaecology, Orthopaedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and Other Topics of Interest to Students and Practitioners, by Leading Members of the Medical Profession Throughout the World, Edited by H. R. M. Landis, M. D., Philadelphia, U. S. A., with the Collaboration of Chas. H. Mayo, M. D., Rochester;; Sir Wm. Osler, Bart, M. D., F. R. S., Oxford; Frank Billings, M. D., Chicago; A. McPhedran, M. D., Toronto; J. W. Ballantyne, M. D., Edinburgh; Arthur F. Beifeld, M. D., Chicago; Rupert Blue, M. D., D. P. H., Washington, D. C.; John G. Clark, M. D., Philadelphia; James J. Walsh, M. D., New York; Charles Green Cumston, M. D., Geneva; Richard Kretz, M. D., Vienna, with Correspondents in Montreal, London, Paris, Berlin, Vienna, Leipsic, Brussels, and Geneva. Volume 1, Twenty-Eight Series, 1918. Philadelphia and London, J. B. Lippincott Company, 1918.

The war with all its horrors and inconveniences and the great difficulty in production and getting material does not seem to affect this great publishing house. This volume is equal to a very high standard previously established by many splendid volumes that has preceded this. It contains 298 pages and has uniform and familiar binding and the general make up of the one hundred and twelve volumes preceding it. The illustrations in the book are possibly more numerous and well suited to illustrate the subjects discussed. We always have a feeling of conservatism when reviewing these books and we most heartily recommend the book.

Handicaps of Childhood, by H. Addington Bruce, Author of "Psychology and Parenthood," "The Riddle of Personality," etc. Price $1.50. New York, Dodd, Mead and Company.

Of universal interest are the recent discoveries in the realm of child psychology —discoveries that are effecting a revolution in the methods of upbringing the next generation. Mr. Bruce has made a scientific study of the child's psychical and physical reactions, and has achieved an enviable reputation among thinkers on this subject. In this book, "Handicaps of Childhood," the various aspects of the child's consciousness are analyzed and carefully detailed in relation to the corrective measures necessary for leading the child to a right conception of himself and of his world about him. Such topics as Mental Backwardness, Sulkiness, Jealousy, Selfishness, Bashfulness, Stammering, Night Terrors, and Children's Reading are illuminatingly discussed, making them of practical value to the modern parent. "Handicaps of Childhood," together with "Psychology and Parenthood," are books that no thinking mother or father today can afford to miss studying carefully.

The book contains 310 pages and is attractively gotten up. The reviewer predicts that the present edition of this book will have a very large sale, certainly it will if its merits are known.

Popular Science Monthly.

The following articles appear in the April, 1918, issue:

"Fishing Airplanes form the Sky in Nets," "Introducing the Moropus," "Browning, the Gun Wizard," "Using Minstrels to Sell Automobiles," "Our Annual Coal Drama," "King Weather Rules the War," "Dealing Death with Depth-Bombs," "Conquering the Poles by Airplane," "Torpedo-Proofing Ships with Air Tanks," "Mothers for Airplanes at Sea,"

Miscellaneous.

EXAMINATION QUESTIONS.

Texas State Board of Medical Examiners.

Anatomy.

1. Locate the following processes: (a) coronoid, (b) acromion, (c) coracoid.

2. Give superficial origin and distribution of the tenth cranial nerve.

3. Name the openings into the pharynx.

4. With what bones does the radius articulate?

5. Name the branches of the brachial artery.

6. Name the ganglia connected with the fifth pair of cranial nerves.

7. Describe the omentum.

8. Describe the mediastinum. In what divisions are the following structures: (a) innominate artery, (b) branches of internal mammary artery, (c) ascending aorta, (d) descending aorta?

9. Name the ductless glands.

10. Describe the coeliac axis.—Dr. S. L. Scothorn.

Chemistry.

1. Upon what does the efficiency of Dakin's solution depend? (Calcium chloride plus bicarb. sod. plus carb. sod.)

2. Detect traces of lead in water drawn through lead pipes.

3. Where is iodine obtained? Give physical properties.

4. What is the range of specific gravity of normal urine? Why is the specific gravity high in diabetic urine?

5. What is bleaching powder and upon what does its efficiency depend?

6. Antidote for bichloride poison.

7. Complete and give common names of the two products formed: $2Na\,Cl$ plus H_2SO_4 equal?

8. Define water of crystallization; chemical affinity.

9. Distinguish between mercuric and mercurous chloride.

10. Why doesn't a hydrogen flame give the light of a coal-gas flame? Which is hotter?—Wr. J. J. Williams.

Surgery.

1. Symptoms and diagnosis of empyema of the antrum of Highmore.

2. Diagnosis of Ludwig's angina.

3. Describe rodent ulcer, its origin and treatment.

4. Diagnosis of dislocation of the elbow joint.

5. Symptoms of posterior dislocation of the hip joint.

6. Describe Colles' fracture and treatment.

7. Define retention of urine and give the usual causes.

8. For what surgical complications would you be on the lookout in treating a case of typhoid fever?

9. Describe in detail the technique of sewing up the abdominal wall concluding a clean operation.

10. Symptoms and method of handling acute femoral phlebitis.—Dr. J. S. McCelvey.

Physical Diagnosis.

1. How would you distinguish aortic aneurism from intrathoracic tumor?

2. Differentiate hydrothorax from a pleuritic effusion.

3. How are intussusception of the bowel and acute dysentery differentiated?

4. How would you distinguish cerebral hemorrhage from cerebral thrombosis?

5. How does acute myelitis differ from multiple neuritis?

6. How would you differentiate chronic gastritis from cancer of stomach?

7. How are hysterical paralysis and paralysis of organic cerebral origin differentiated?

8. Differentiate acute laryngitis from oedema of the larynx.

9. How may tetany be distinguished from tetanus?

10. Differentiate pernicious anemia from leukemia.—Dr. T. J. Crowe.

Gynecology.

1. Etiology of metrorrhagia in married women 35 years of age.

2. Differential diagnosis of fibroid tumor of uterus and tubal pregnancy before rupture.

3. What is the evil of unsexing women during menstrual life?

4. How would you manage suppurative vaginitis (probably gonococcic) in a girl seven years of age?

5. Which is your preference of all the round ligament operations for retroposed uterus?

6. Describe the blood supply of the ovary.

7. What are: (a) dyspareunia, (b) hydrosalpinx, (c) kraurosis vulvae, (d) procedentia uteri?

8. What are the relations of a normal uterus?

9. How would you manage a lump in the breast of a nulliarous woman 30 years of age?

10. What would contra-indicate operation for suppurative salpingitis.—Dr. J. H. McLean.

Physiology.

1. Name the general functions of epithelium and enumerate its chief varieties.
2. What is the chief property of muscle? Of nerve?
3. State how and when the heart is nourished and the average amount of blood in the human body in proportion to weight.
4. Name the functions of the stomach and the digestive processes which take place in it.
5. What selective function have the villi? What are the functions of bile?
6. How do you explain immunity?
7. Define: (a) dyspnoea, (b) apnoea, (c) eupnoea.
8. What is the function of the semicircular canals? otoliths? organ of Corti?
9. Explain the formation and function of corpora lutea.
10. Locate the centers of the higher mental faculties.—Dr. M. F. Bettencourt.

Obstetrics.

1. How would you manage a frank breach presentation?
2. Tell in brief how you would have a patient prepared for normal confinement.
3. Describe methods to determine the position of the child at beginning of labor.
4. Describe the immediate care of the new-born child.
5. Name some of the diseases of pregnancy.
6. How would you manage a face presentation?
7. Give the cause and the management of prolapsed cord.
8. What are the indications for the use of obstetric forceps?
9. What would cause recurrent postpartum hemorrhage?
10. What do you understand by version? Describe the management of same. —Dr. A. M. McElhannon.

Pathology.

1. Describe the microscopic appearance of an epithelioma of the lip.
2. Describe microscopically a giant-cell sarcoma of the femur.
3. Recount the changes which take place in a tuberculous knee.
4. Describe the changes which take place in the vessels in arterio-sclerosis.
5. Describe the minute structure of an angioma.
6. Describe the changes which take place in a joint affected with arthritis deformans.
7. What changes are apt to occur in the heart muscle in advanced interstitial nephritis?
8. Mention the causes of and describe the tissue changes in senile gangrene.
9. What is pus?
10. Name the various forms of degeneration and describe one of them.—Dr. W. C. Swain.

Bacteriology.

1. Describe the smegma bacillus and differentiate it from the tubercle bacillus.
2. Give the morphology and cultural characteristics of Spirochaetae obermeieri.
3. Give portals of entry of the following named organisms: (a) meningococcus, (b) trichina, (c) Klebs-Loeffler bacillus, (d) the bacilli of typhoid and paratyphoid fever, (e) and the organisms of typhus fever.
4. Describe the action of the phagocytes in the repair of an infected wound.
5. What are the principal organisms present in the uterus and adenexa in a patient ill with puerperal fever?
6. Name all the pus producing organisms.
7. Describe the bacillus anthracis and give technique of process of isolation.
8. Name the commonest organisms found in suppurative appendicitis.
9. Name an example of each of the following species of disease producing organisms: (a) coccus, (b) bacterium, (c) spirillum, (d) saprophyte, (e) and one each of the four divisions of pathogenic protozoa. Also name one filterable virus.
10. Give morphology and cultural characteristics of Bacillus aerogenes capsulatus and tell in what pathological conditions it is found.—Dr. H. C. Morrow.

Hygiene.

1. Give prophylactic care of diphtheria.
2. Name five infectious diseases you would quarantine.
3. What prophylactic measures are indicated in epidemic meningitis?
4. What is pasteurized milk?
5. What hygienic conditions are ideal for residence, town or village?
6. Name three antiseptics for general use.
7. Give hygiene of baby during the first three days of life.
8. Give hygienic care of early tuberculosis of lungs.
9. What hygienic precaution should be observed against infection by the gonococcus?
10. Give hygienic care of pneumonia.—Dr. H. B. Mason.

Histology.

1. Give the histology of skin.
2. Draw section of mid-dorsal region of spinal cord.
3. Give histology of pancreas.
4. Describe the coverings of the brain.
5. Give histology of veins; how differentiated from arteries?
6. Give histology of lungs.
7. Describe the diaphragm histologically.
8. Give histology of ovary.
9. Give histology of duodenum.
10. Describe structure of liver.—Dr. H. B. Mason.

Medical Jurisprudence.

1. Give duties of coroner's physician.
2. Define Statute Law.
3. Define Common Law.
4. Differentiate circumstantial evidence from fact testimony.
5. Give briefly manner of making post mortem examinations.
6. Name the three varieties of insanity.
7. Define dipsomania.
8. Name five irritant poisons.
9. Define neurotic poison and name four.
10. Give symptoms of strychnin poisoning.—Dr. M. A. Cooper.

The Tax on Oleomargarins.

The world war has served in the most unexpected ways to awaken this nation to the true meaning of food problems and to the magnitude of many heretofore undervalued factors in the rationing of the American people. The growing scarcity of milk has dawned on us along with a profounder realization of the indispensability of a certain quota of milk in the daily diet of children. In addition to what may be termed a physiologic requirement in the case of the adolescent, culinary customs have created a further demand for milk, which plays a part in modern cookery in almost innumerable ways. Without milk in the kitchen, the American housewife would be confronted with unanticipated difficulties in the technic of food preparation. For this reason the dairyman is urged to speed up the production of milk, the housewife, on the other hand, is warned to be conservative in the use of a food commodity on which our children should have first claim.

The use of butter, which has unquestionably grown in popularity in this country in recent years until the per capita consumption approximates nearly an ounce a day, is closely bound up with the problems of milk supply. It requires many quarts of milk to produce a pound of butter ,and so long as skim milk, which is the chief by-product in the manufacture of butter, remains so greatly undervalued in human dietary practice, it may truly be said that butter making diverts enormous quantities of milk into channels in which all of its nutrients except the fats are lost for human consumption. The need of fats in the dietary is beyond dispute. To deprive any nation of a reasonable quota of edible fats is to institute a national calamity of the direst sort. No one will gainsay that butter has won a deserved place of excellence in the dietary of man. The inexorable law of supply and demand has increased the price of butter to a point at which its cost is almost prohibitive for the poorer classes; and incidentally the high price serves to divert more milk than ever before into the churning room. Guided by the experience of other countries, as well as by the common sense of which science is merely an organized expression, American housewives have long since learned that there is no monopoly of usefulness pertaining to any one of a considerable number of fats of both vegetable and animal origin. Technology furnished successful means of varying the texture of naturally occurring fats so that desired or supposedly advantageous degrees of hardness or softness could be secured. The history of these endeavors—the story of the technical production of butter substitutes and so-called artificial butters, oleomargarins, hydrogenated fats, etc.—need not be reviewed here. It includes chapters of bitter controversies that have lost their early significance through the demonstration, repeatedly verified, that these newer types of fats are alike digestible and wholesome, and that today they reach the markets in excellent sanitary condition. The sale of many edible fat mixtures has, however, been so greatly hampered by legal restrictions that the public has had little opportunity or inducement to become acquainted with the newer food possibilities.

The national and international situation as regards edible fats and butter in particular has forced attention to the hitherto depreciated products until candor compels an honest investigation of the merits and effects of the legislation at present in force. The modern oleomargarin laws date from 1886, when oleo oils, lard and cottonseed oils alone competed to any extent for recognition as butter substitutes. At present this list is augmented by increased production of peanut oil, copra and cocoanut oils, soy bean oil, maize oil and highly refined cottonseed oil. These lend themselves to a great variety of combinations and transformations to produce edible fats. The government imposes a large tax on dealers and manufacturers of oleomargarin, with large fines for failure to comply with the legal restrictions. Colored oleomargarin pays a tax of 10 cents a pound; the uncolored fat pays one-quarter cent. Butter is colored to imitate the golden yellow shade of the summer variety at all times of the year, without any interference by an almost prohibitory tax on a much desired food.

The New York Times, commenting on the obvious unfairness of the present situation, stated editorially not long ago:

"The only imaginable reason why the white oleomargarin that next to nobody will buy is taxed and can be sold only under an elaborate system of licenses, and why, if it be colored exactly as is all except a very little of the very best butter, and so made largely salable, the licensing system is still further elaborated and the tax many times multiplied—the reason for all that is because the dairymen want it to be so. They have never been able to deny that oleomargarin is as wholesome and nutritious as their own product.

"Whether made of beef fat or of any of several pure vegetable oils, there is nothing to be said against oleomargarin as a food and much in its favor. Even to the imagination it ought to appeal more effectively than butter, for it is of far cleaner origin, and there is no suspicion, as in the case of butter, that it sometimes carries the germs of disease."

In spite of all the restrictions placed on the sale of oleomargarin, the statistics of its manufacture show an increased demand for the product during the past year, represented by an output of nearly 235,000,000 pounds. Is it not high time to ask whether indifference to the needs of the general public shall continue to be maintained by a special class? If the legitimate substitutes for butter were allowed to come into the general use for which they are qualified, not only would a reduction of living expenses become possible thereby, but also the price of milk and cream ought to be decreased below the rapidly approaching prohibitive point.

It is doubtless true that the fats of milk carry a desirable amount of growth-promoting vitamin which the oleo oils manifest only in lesser degree, and which the vegetable fats seem to lack entirely. No one asserts that butter and cream should be excluded from the ration. All that can be asked in fairness is a repeal of the odious discriminatory taxes that tend to prevent the other fats from competing with butter on fair terms. If the necessities of war succeed in doing this, they will merely right a wrong that has long offended fair minded students of nutrition.

Auricular Fibrillation.—Price, in The London Practitioner, defines auricular fibrillation as a condition in which co-ordinate contraction of the auricle is replaced by inco-ordinate contraction. The individual fibres, instead of contracting in an orderly and simultaneous manner, do so rapidly and independently of each other, with the result that systole of the chamber as a whole never takes place. When this has once set in it persists for the rest of life in the majority of cases, though paroxysmal cases occur in which attacks occur at infrequent intervals. In the great majority of cases it is indicative of some myorcardial disease. The degree of cardiac failure which results from it may be slight or very severe; this depends on the rate of the ventricular action and the degree of muscular defect. The onset of symptoms is gradual as a rule, but may be rapid. After discussing the effort of auricular fibrillation on the heart, the etiology of the condition and its symptoatology, the writer commends highly the use of digitalis. Whether there is mitral disease, aortic disease, or disease of the myoracdium, if the ventricular rate is rapid, digitalis or one of its allies should be administered, the results in the majority of cases being very good and in some cases extraordinary good. There is a rapid fall in the pulse rate and a concomitant improvement in the general symptoms. Two exceptions are some cases of well marked myocardinal degeneration, and, cases in which there is accompanying pyrexia. He is accustomed to begin with a dram of the tincture a day or in urgent cases one and a half or two drams, to continue until there is nausea or vomiting, diarrhea, headache, an unduly slow pulse, or what is called coupling of the beats. The drug is then stopped until these symptoms have passed away, which is general in a few days. A relapse usually follows and then the indication is to find out what dose suits him best, that is, the dose sufficient to control the action of the heart without giving rise to toxic symptoms; this may require weeks or months of careful observation. He generally begins with half of the original dose and increases or diminishes this as the rate of the heart is affected. Help may frequently be obtained from the patient who is often able to say what dose suits him best. The necessary dose varies widely; it may be as small as a dram of the tincture a week, or as large as forty-five minims or more a day. Having discovered this dose it will be necessary in the majority of cases for the patient to continue the use of the drug for the rest of his life, though variations in the dose may be found necessary in the course of time. He thinks that the cumulative action of digitalis is apparently not nearly so important as has been believed, but at the same time he urges watching the pulse. Coupling of the beats is a danger signal, at which we should either stop the drug for a few days or diminish the dose. When auricular fibrillation is not accompanied by a rapid pulse, no decided result usually follows the administration of digitalis, and it is often difficult to say how far it aids the other measures adopted in securing improvement. In urgent cases of cardiac failure in which a more speedy result is desired than is possible from the administration of digitalis by mouth, he give san intravenous injection of strophanthin, either one dose of 0.01 grain, or two or three doses of 0.004 grain every two hours, followed by the administration of tincture of digitalis by the mouth when advisable.

Treatment of Entamoeba Histolytica "Carriers" With Emetine-Bismuth-Iodide.—Lillie and Shepheard, in The London Medical Lancet, reach these conclusions, which they think may be drawn from the facts which they present in the body of their communication:

1. (a) That "carriers" of E. histolytica who had not had any injections of emetine hydrochloride were cured to the extent of 78 per cent. by two courses of the salol-coated emetine-bismuth-iodide pills. (b) In the case of men who had had emetine injections 72.8 per cent. were cured by two courses of the salol-coated pills. (c) In the case of men who had not had emetine injections 70 per cent. were cured by two courses of the keratin-coated tablets. (d) In the case of men who had had emetine injections 45.4 per cent. were cured by two coruses of the keratin-coated tablets.

The difference between the percentages in (a) and (b) are within the range of experimental error and need not be considered. But in (c) and (d) the difference is too great to be ignored. This difference may be due to variation in the quality of the keratin-coated tablets, but such a defect would be common to both cases which had received injections of emetine and those which had not. It is generally admitted that certain "carriers" of E. histolytica are not cured by emetine in any form, and it may be, as Mr. Dobell suggests, that these cases become segregated in (d). It seems possible that the difference in the two percentages may be due to the injections of emetine rendering the "carriers" less liable to be cured by emetine-bismuth-iodide.

For comporison with the above percentages of cures by a maximum of 72 grains of emetine-bismuth-iodide carried out in the special ward Lillie and Shepheard give the number and percentage of cures in the other wards of Mont Dore Military Hospital. The number of grains of the compound which these cases received varied from 36 to 200. A case was regarded as cured after not less than five negative examinations over a period of not less than five weeks after the end of treatment. The last test was made at the Barton Convalescent Depot. Out of 160 cases treated 142 were cured—i. e., 88.7 per cent.

2. There is no evidence that the length of time between the dates of onset of dysentery symptoms and the treatment has any effect upon the chances of cure by emetine-bismuth-iodide.

3. There is no ground for the belief that the vomiting diminishes the chance of cure by this treatment. There is nearly as much vomiting among the cases which are cured as among those which relapse.

4. The age of the patient has no effect upon the chance of cure by the drug. But there is evidence to show that men over forty years of age vomit less while undergoing treatment.

5. The salol-coated pills are a distinct improvement upon the keratin-coated tablets from a curative point of view. They also cause less vomiting and loss of weight.

Pyorrhea Alveolaris.—Gibbs (Edinburgh Medical Journal), publishes quite a long contribution on this well-known subject. He insists that remedial treatment to be effective must be instituted early—in the stage of early marginal gingivitis. Every microscopic piece of tartar must be removed, and the patient told that whether he keeps his teeth or not depends wholly upon his using them efficiently and avoiding soft, sticky, sweet food, that so readily ferments at the margins of the gums. Careful and proper brushing of the teeth and gums is distinctly helpful, but, as commonly used, the tooth-brush is a very questionable aid. The brush should be as small as possible, with fairly stiff bristles cut of unequal length, so as to present a saw-edge. The faces of the teeth should not be brushed across at all, as this does no good, and almost always does much harm in the long run. The rule is "Brush the gums on to the teeth" by a rotary movement of the brush on its long axis. The lower teeth are therefore brushed upwards and the upper teeth downwards, the brush being lifted clear of the gums and teeth for the return stroke or movement. In this way sticky food is swept away from between the teeth as with a tooth-pick, which is also useful. Tooth powders and all alkaline dentifrices are harmful. The best artificial aid of that sort is a saturated solution of bitartrate of potash, which is distinctly beneficial.

In the later stages much can still be done to keep the process in abeyance by affording complete drainage, secundum artem, to any pockets that have formed, and by periodical visits to the dentist for thorough removal of any calcareous deposits.

At all stages any functionless teeth should be removed, and, in the late stages, when the teeth are getting loose, the sooner they are removed the better, both from the standpoint of general health and because better alveolar ridges will be left for artificial teeth, which must inevitably come. All sorts of specific treatments come and go, and they need not be discussed further than to say that, in the opinion of Gibbs, neither vaccines nor the newer emetine treatment, based on the idea of an amebiasis, are of the slightest value.

Report on the Treatment of Fifty-Nine Cases of Entamoeba Histolytica Infection.—Savage, in The Journal of the Royal Army Medical Corps, reaches certain conclusions and makes the following summary of his conclusions:

1. Emetine hydrochloride injections were given to nineteen cases of E. histolytica infection—sixteen cyst carriers and three acute cases. Fifty per cent. of the former were cured, and 33 per cent. of the latter.

2. Emetine injections in conjunction with (a) pulv. ipecacuanha, and (b) half-grain emetine orally, were given to seven and four patients respectively, with very good results. Six of the former were cured, and all the latter.

3. Emetine bismuth iodide was given to thirty-three cases—seventeen cyst carriers and sixteen acute cases; 82.4 per cent of the cyst carriers were cured, and 50 per cent. of the acute cases. The results in the cyst carrier case scorroborate those obtained in England.

4. Emetine one-grain injections along with emetine bismuth iodide one to two grains daily were given to (a) two cyst carriers, uncured by emetine bismuth iodide—one was cured, the other relapsed; (b) six acute cases uncured by the double iodide alone—only one was cured, and the other five relapsed; and (c) two acute cases not previously given emetine bismuth iodide—one was cured, the other relapsed.

5. Patients who have not previously had emetine injections appear to be cured with the double iodide, whether they are cyst carriers or acute; 88.9 per cent. of such cases were cured.

6. Emetine bismuth iodide causes the infection to disappear more quickly from the stools than does emetine hydrochloride, and appears to prolong the negative period before a relapse and, consequently, a longer period of control seems necessary.

7. Acute cases were negative on the average for twenty-one days before relapsing after treatment with emetine bismuth iodide.

8. Emetine bismuth iodide has practically no effect on intestinal protozoal infections other than E. histolytica.

Teratogenic Role of Attempted Abortion.—Nageotte-Wilbouchewitch (Presse Medicale), reports a number of cases suggesting that unsuccessful attempts at abortion may result in definite malformations in the offspring. The stage of intrauterine life at which the injury has taken place and the malformations noted may be compared with known chronological facts in human embryology. The first case referred to showed an anormal elevation of the right scapula, a suggestion of club hands, short ring fingers, abnormally arched feet, a supernumerary toe, evidences of incipient hare lip, supernumerary canine teeth, maxillary and dental deformities ,small branchial fibrochondromas ,and a series of angiomas on the neck. No hereditary malformation could be traced, nor were there any indications of syphilis or alcoholism. Study of the malformations suggested a disturbance occurring not later than the sixth week of intrauterine life. Inquiry revealed that at about the end of the third week of pregnancy a number of nonsurgical measures, including drastic purgatives, had been carried out in an attempt at abortion. Four other cases are described in which various deficiencies in the offspring seemed due to similar attempts, viz., idiocy; congenital stenosis of the rectum, with hemivertebrae and absence of one rib; absence of the radius; complete epispadias, with luxation of both fibulas. He has in mind a number of additional cases of the same type. These subjects are characterized, as a group, by robust health apart from the malformations; children with inherited taints, on the other hand, are as a rule, puny, ugly, and otherwise unattractive. Experiments illustrating malformations due to injections of morphine or lead nitrate in hen's eggs, or to exposure to vapors of chloroform, absinthe, etc., have been performed by Fere. By destroying one or more cells in the eggs of ascidians, Chabry has produced various monstrosities through deficient segmentation. The malformations correspond strictly to the cells or groups of cells destroyed, whether the destruction itself be accomplished by a poison, mechanical puncture, capillary hemorrhage, thrombosis ,a spirochete, or the tubercle bacillus.

Pneumonia in Children.—Mills (Dominion Medical Monthly), prefers to feed the child by enteroclysis in cases of irritable stomach, giving four ounces of a five per cent. solution of glucose by the Murphy drip, twenty drops to the minute, every four hours. In breast fed children it is best to withdraw the milk from the mother's breast and feed it to the baby by means of a Breck feeder. Where the temperature is high it should first be peptonized. Where prolonged stimulation is necessary, enteroclysis of hot coffee four ounces, by the Murphy drip, twenty drops a minute, is given every four hours. To this a dram of whiskey may be added. Dry cupping and hot mustard applications are the best external agents. The latter is made by adding a teaspoonful of mustard to a pint of hot water. A piece of flannel of four thicknesses is wrung out of this and applied to the chest for twenty minutes. This is repeated every two or four hours as necessary. For inhalations give creosote, benzoin, tinctura opii camphoratae, and oil of eucalyptus. Opium should not be administered for restlessness. An ice bag to the head and a hot water bottle to the feet, tepid sponges ,and high colonic irrigations should be employed. Castor oil should not be administered as an initial cathartic excepting when the child is suffering from diarrhea, as the subsequent constipation might prove to be a complication. Milk of magnesia is better, but the best cathartic is calomel in powdered form given dry on the tongue followed by milk of magnesia or a saturated solution of magnesium sulphate in orange juice. Digitalis and ammonia should be avoided as stimulants. Nitroglycerin is indicated in cases of cyanosis with a mottled appearance of the face, strophanthus in cases of rapid but regular pulse, and strychnine in cases of broken compensation. All should be administered hypodermically. Caffeine sodium benzoate is also of value. Respiratory failure calls for atropine by hypodermic and oxygen inhalations. Balneotherapy and hydrotherapy are valuable adjuncts in the treatment of pneumonia in children and may often obviate the necessity of using nauseating cough mixtures, antipyretics, and stimulants, thus saving the gastrointestinal tract.

Treatment of Fractures in Warfare.—Lane, in The London Lancet, criticizes much of the practice of surgeons in this field as incompetent and improperly carried out, and offers a number of conclusions as to what should be done in order to secure the best results. Plating should be performed in the presence of a foul wound only in very exceptional circumstances, and when used in such cases provision should be made for absolutely free drainage. Also, if plating must be resorted to under such conditions, the screws should be inserted as far from the site of fracture as possible. In all other cases operative interference should be postponed until the wounds have been healed for some time and the likelihood of latent infection reduced to the minimum. In such cases if there is a focus of infection found at operation a vaccine should be made from the organisms present and used at once if symptoms of infection develop. If there is suspicion of a latent sepsis Carrel's treatment should be adopted immediately, otherwise the wound should be closed completely. Every possible attempt should be made to prevent shortening of the limb and no bone should ever be removed to obtain accurate apposition of the fragments. It is not necessary to secure apposition of the entire areas of the broken ends, as the interval will fill with new bone promptly. Fragments of bone and of callus should be saved and used to fill in intervals between the ends. Much heavier steel plates than are used in civil life must be employed in the badly comminuted and malunited fractures due to projectiles. The joints near the fracture should be moved as early as possible to prevent stiffness and limitation of motion through contractures. If strain likely to cause non-union can be avoided, the patient should be made ambulatory as soon as possible to hasten repair. Intervals between fragments too great to be filled in by new bone can be bridged by bone removed from part of the circumference of one of the fragments or from some other part of the body. Most failures in grafting are due to dependence on the unsatisfactory grip of the graft alone on the fragments.

Sulphur Dioxide in Gonococcal Urethritis.—Lacombe (Presse Medicale), asserts that by suitable use of sulphur dioxide the gonococcus can be reached even in the deeper layers of the urethral mucosa and results thus secured which no other method has as yet given, even in advanced cases of acute urethritis and in chronic urethritis. Two solutions are employed, the first obtained by dissolving six grams of picric acid in one litre of water; the second, containing seventeen grams of sodium hyposulphite in the same quantity of water. At each injection a mixture of four mils of the first solution with one mil of the second is administered. The two chemicals react in the urethra, with formation of two to three mils of sulphur dioxide gas, as well as sodium picrate and free sulphur. The liberation of gas proceeds rather slowly, being complete only after about twenty minutes. The volume of the lumen of the infected anterior urethra being about five mils of solution, the sulphur dioxide exerts pressure on the urethral walls and soon penetrates into all glandular diverticula, cellular interstices, etc., in which the gonococcus lurks and is protected from antiseptics as usually applied. In beginning acute urethritis, and in established anterior urethritis, five mil injections are given three times daily; in estalished anterior and posterior urethritis, six mil injections are substituted in order to reach the posterior urethra. In the period of decline in acute urethritis, and also in chronic, a single six or five mil injection is given daily, according to whether the three glass test is positive or negative. Appropriate internal treatment, with rest and a suspensory, is also ordered. The injections are painless. Each time the solution should be retained at least fifteen minutes. Each of the two solutions should before use have been heated to body temperature. Use of the method in 130 cases yielded excellent results as regards both rapidity and permanence of recovery. The thickest discharge and the most obstinate oozing were alike promptly arrested.

Ludwig's Angina.—Halphen (Presse Medicale), reports a case of phlegmonous inflammation of the floor of the mouth mistaken for Ludwig's angina and in which recovery was obtained after drainage through the mylohyoid muscle and removal of the wisdom tooth. The latter had been the starting point of the infection. Osteoperiostitis of dental origin is often erroneously labeled adenitis or adenophlegmon. The teeth having no lymph canaliculi, the infection, unless a lesion of the mucous membrane exists, always travels from the dental pulp to the bone, thence to the periosteum and the cervicular cellular tissue, forming what Sebileau has termed a periperiostitis. Removal of the tooth is generally sufficient to overcome this condition. True Ludwig's angina, which is rare, is characterized especially by the gravity of the general symptoms, the patient succumbing even before pus has collected. It is thus notably different from edema, phlegmonous inflammations, and abscesses of the floor of the mouth, rather frequently met with and amenable to drainage, a well marked collection of pus, always with a putrid odor, being evacuated. In Ludwig's angina the muscles are found sphacelated. Points of resemblance consist of the almost exclusively anaerobic bacterial flora, analogous to that of pulpits and dental caries, and the characteristic situation of the disease process. Ludwig's angina is actually a misnomer, the disease having been discovered by Gensoul five years before Ludwig. The condition is merely a hypertoxic form of the gangrenous phlegmons involving the floor of the mouth, just as massive gangrene may set in in severe wounds of the extremitie sand in fulminating appendicitis. In involvements of the floor of the mouth general anesthesia nearly always leads to syncope, sometimes fatal, and should be replaced by local anesthesia or anesthesia by intercricothyroid laryngotomy.

A Useful Local Anesthetic.

It is doubtful if any new remedial agent in many years has met with a readier acceptance by American physicians and surgeons than is being accorded to Apothesine, the synthetic local anesthetic recently announced by Parke, Davis & Co. The prompt appreciation which has marked the advent of this new product is gratifying for two reasons: Apothesine is an efficient and broadly useful local anesthetic; it is a fruit of American enterprise and research.

Apothesine is described as the hydrochloride of gamma-diethyl-amino-propyl cinnamate. It occurs in the form of small snow-white crystals, having a melting point of 137 deg. C. It is readily soluble in alcohol, slightly soluble in acetone and ether, and very soluble in water. If desired, it may be sterilized, in solution, by boiling, and it can be combined with any of the usual synergists.

Clinical reports show that Apothesine is as potent as the popular synthetic local anesthetics, while it is less toxic than most of them. It is not a derivative of cocaine, and it does not induce "habit" formation. It is not subject to the narcotic law.

Apothesine is suitable for use in any surgical procedure in which a local anesthetic is indicated. It has been employed with marked satisfaction by more than a hundred surgeons in over one thousand cases, including both major and minor operations.

Apothesine is supplied in hypodermic-tablet form, as follows:

H. T. No. 216.—Each tablet contains 1¼ grains of Apothesine. One tablet in 60 minims of water makes a 2 per cent. solution. Vials of 20 and 100.

H. T. No. 217.—Each tablet contains 3-5 grain of Apothesine and 1-1600 grain of Adrenalin. One tablet in 60 minims of water makes a 1 per cent. solution of Aposthesine in Adrenalin 1-100,000. Vials of 25 and 100.

Parke, Davis & Co. announce that they will be pleased to send literature on Apothesine to any physician or surgeon who is interested in the product.

Incidence of Scabbies in War Time.—Thibierge (Bulletin de l'Academie de Medicine), presents statistics from the Paris hospitals showing that since the beginning of the war the incidence of scabies has been constantly increasing. The incidence among females is especially significant, since the number of females admitted is not liable to variation from such factors as mobilization, the recall of workmen, and the calling out of new military classes. The incidence among women showed in the last quarter of 1917 an increase of 350 per cent .as compared to the corresponding quarter of 1914. All classes of the Parisian population are participating in this increase, the author now receiving ten to twelve scabies cases among every 100 patients, whereas before the war the ratio of scabies was hardly one per cent. Transmission occurs generally at night, and especially in sexual intercourse. A single woman with scabies in a cantonment results in transmission to numerous men. Transmission also occurs through bedclothing, and therefore increase with any difficulty experienced in securing proper laundering and disinfection of blankets or sleeping bags. In the civil population the increase in scabies results chieffy from the return of the men on furlough. The scabies curve shows a marked rise in the last quarter of 1915, and it was in July of that year that the first furloughs were granted. Propagation is likewise favored by frequent failures to recognize the disease, the author daily meeting with scabies cases treated for months for eczema, urticaria, prurigo of digestive origin, etc. Concluding, the author urges attention to the extreme frequency of the disease, careful examination for its signs in all cases of itching, and the institution of proper hygienic and prophylactic measures by the authorities.

Binocular Vision and the Hole in the Hand Test.—Cantonnet (Presse Medicale), describes a simple test which consists in looking through a rolled up sheet of paper or cardboard tube with one eye while the hand is held up in front of and about twenty-five centimetres from the other eye. Under normal conditions the hand seems as though perforated by a hole through which the object seen through the tube by the other eye are visible. This procedure serves, in the hands of the general practitioner, as a useful test of binocular vision and for the detection of latent strabismus. Where the right eye looks through the tube and the left hand is held up before the left eye, the patient may, 1, see the image through the tube and also the left hand, in which case binocular vision is present; 2, he may see the image through the tube and not the hand, in which case the left eye is blind or in abeyance; or, 3, he may see the hand but not the image through the tube, in which case the right eye is blind or in abeyance. Again, where binocular vision does exist, it is perfect only where the hole in the hand, with the latter held in contact with the tube, is seen in the centre of the palm. If the hole is seen in the right side of the hand or beyond it on the right, excessive convergence is demonstrated, its extent varying according to the degree of displacement of the hole from the central position. Correspondingly, if the hole is seen to the left of the centre of the palm there is a tendency to divergence, and if it is seen entirely beyond the hand, an actual divergent strabismus. Where the hole is seen higher or lower than the level of the tube, vertical deviation is demonstrated; such deviations are nearly always associated with a more pronounced convergent deviation.

Nature of the Wassermann Reaction.—Vernes (Presse Medicale), notes that experience with the Wassermann reaction has shown it to occur in a manner different from that which Wassermann had originally supposed. Thus, the original extract of syphilitic liver used in the test can be easily replaced by normal liver extract or even extracts of other normal organs, such as the heart or voluntary muscles. In attempting to explain the intimate nature of the reaction, Vernes was led to study the behavior of certain colloidal suspensions in the presence of syphilitic serum. The doctor placed in each of a series of test tubes two mils of a suspension of yellow iron hydroxide, prepared with 0.225 gram of ferric acetate in 250 mils of distilled water. To these tubes he added, from left to right, increasingly smaller amounts of normal human serum diluted with 0.9 per cent. sodium chloride solution up to 0.2 mil. After being kept forty minutes in the incubator, the tubes showed a peculiar alternating action on the suspension, flocculation being nil in the tubes with most serum, complete in tubes with somewhat less, lost again in subsequent tubes, later reappearing again, and finally, in the most dilute tubes prepared, lost anew. Decreasing or increasing the concentration of the hydroxide suspension used caused the curves in the table presenting the results to shift to the right or the left. Substitution of syphilitic for normal serum, in any strength of hydroxide suspension, regularly shifted the flocculation curves to the left as compared to those of normal serum. With appropriate dilutions the reaction can be so ordered as to bring about flocculation with syphilitic serums and absence of flocculation with normal serum. In another article the author will show that by a precise technic syphilitic can be differentiated from normal serums, and also severity of infection, if present, determined.

Hot Gutta Percha Covered Dressings in Gynecological and Other Affections.—Bonet-Henry (Bulletin de l'Academie de Medicine), notes that while metritis, menorrhagia, and cervical ulcerations improve under local irrigations at temperatures not exceeding 45 or 46 deggrees C., fatty materials such as liquid petrolatum and paraffin are advantageous in that they can be applied for a longer time. By further use of some poorly conducting material, temperatures can be employed without danger of a burn such as could not otherwise be tolerated and the dressing can be made to lose heat so slowly as to register 39 or 40 deg. C. even on the following day. The nonconductor material recommended by the author is gutta percha. This causes melted paraffin mixed with it to cool ten times more slowly than water, permits of its application at temperatures of 60 to 90 deg. C., and supplies a painless, supple, and elastically supportive dressing. The mixture recommended consists of fifty parts of gutta percha to 1,000 parts of a paraffin fusing between 42 and 45 deg. C. The high temperatures to which paraffin can be subjected permits of perfect sterilization. Its analgesic action is undoubted, and the active congestive it induces in the tissues causes an influx of phagocytes which yields favorable results in infected wounds. The mixture referred to has also been employed with satisfaction in gynecological affections, varicose ulcers, and burns.

General Treatment of Gonococcal Infection.—Melamet (Bulletin de 'lAcademie de Medicine), believes the antigonococcic action of potassium permanganate to be due to the manganese it contains, and reports seventy-two cases in which the permanganate or colloidal manganese was administered by intramuscular injection with the aim of destroying the gonococcus not only in the urethra but throughout the system. The three permanganate solutions used contained respectively 1.66, 2, and 2.66 mgm. of the salt in a mil of distilled water. In acute urethritis, daily injections were made into the buttock, beginning with two mils of the first solution, then increasing the dose by one mil every three days up to five mils, next giving two mils of the second solution for three days, increasing up to five mils, and finally using the third solution and stopping at the three mil dose, except in rebellious cases. In acute urethritis with complications, or chronic urethritis, the second solution was used immediately in two mil doses, gradually increased to three or five mils of the third solution, according to indications. The treatment was continued until the symptoms disappeared, or a few days longer. The colloidal treatment, where used, consisted in daily injection of the contents of an ampoule of manganese collobiase or electric manganese. In most case the injections caused localized burning but usually this passed off in five or ten minutes, though occasionally recurring in less degree after four or five hours. No urethral treatment was used. Successful results with the treatment were obtained in sixty-five out of seventy-two cases. Among twenty-seven cases of simple acute urethritis treated with the permanganate, results were good in all but five. The average number of injections to a case was twenty-five to fifty. The treatment was successful in seventeen out of eighteen cases.

Untoward Effects of Emetine Hydrochloride.—Mattei (Paris Medical), states that in some cases of amebic diarrhea administration of emetine causes at first, or even throughout the treatment, an increase in the number and size of the bowel movements, ditsinct benefit appearing only two to eight days after termination of the course of injections. Ampoules of the drug prepared a number of months before use were observed to be less active and to cause local inflammatory reactions more frequently than freshly prepared solutions. Nausea and vomiting appeared in some cases after the second or third daily dose of 0.08 gram. Toward or after the close of a series of injections, low blood pressure and impaired cardiac power was noted in all the author's cases of emetine intoxication, numbering nine out of 220 cases treated. At times cardiac insufficiency appeared suddenly, and in one instance of this type death in collapse followed. In three cases of fatal dysenteric cachexia, rebellious to emetine, persistent tachycardia and embryocardia appeared four to eight days after the close of a series of emetine injections and are believed possibly attributable to the drug. In each of these three cases, expectoration of 500 to 600 grams of clear fluid, mucous secretions daily had been noticed before the beginning of the cardiac disturbance. In two cases there were superadded paroxysms of inspiratory spasm resembling a porlonged hiccough. The patient, sitting up in bed with the mouth wide open, strove vainly for twenty or thirty seconds to complete the respiratory cycle by expiration. Paresis of the muscles, especially of the neck or lower limbs, dysphagia, and distinct persistent trismus were noted in a few cases. Impairment of urea elimination through the kidneys was shown by studies of Ambard's quotient to be a very frequent effect of the drug. Of sixteen patients receiving over one gram of emetine within thirty to thirty-five days, seven showed toxic symptoms immediately or within a week after the conclusion of treatment. Apparently one gram is the maximum safe dose in a month's time.

Colloidal Sulphur.—Cawadias (Bulletin de l'Academie de Medicine), administered intravenous and intra-muscular injections of colloidal sulphur in subacute rheumatism, with prompt and complete results, pain ceasing, deformity showing retrogression, and joint functions being restored. The intramuscular injections, without causing the marked reactions which followed intravenous injections, yielded equal results. Subacute and chronic rheumatic cases subjected to chemical analyses showed elimination in the urine of a large amount of sulpuhr in the form of sulphates, phenylsulphates, and incompletely oxidized sulphur. In the twenty-four hours following administration of colloidal sulphur, the amount of sulphur in the urine decreased, and the reduction of sulphur elimination became constant as recovery set in. During convalescence, sulphur nutrition was improved and the amount of sulphur containing wastes gradually returned to normal. On the white blood cells it exerts an action comparable with that of metallic ferments. The leucocyte count falls immediately after the injection, but rises again some time later. The mononuclears increase. There is thus clearly a leucolytic action, noted likewise when colloidal sulphur is injected in leucemic cases.

Traumatic Glycosuria.—Rathery (Bulletin de l'Academie de Medicine), presents a study of glycosuria in 1,412 wound cases. The first urinary test was made two to four hours after injury and a second after one day's urine had been collected. Glycosuria was met with in sixty instances, or 4.17 per cent. of the entire series. It occurred in the presence of contusions as well as in open wound cases, and was over twice as frequent in subjects with two or more injuries than in those with a single injury. Severity of the wounds did not, however, govern the frequency of glycosuria, in which individual constitutional peculiarities are evidently an important factor. Wounds of the extremities were the most frequently followed by glycosuria, the head coming next. None of the cases of violent commotion, as by explosion of a torpedo nearby, examined showed glycosuria. The amount of glycosuria was usually from two to twenty grams a litre, occasionally thirty or thirty-five grams. As a rule the condition persisted only two or three days, though in one it lasted two weeks and in another several months.

Treatment of Wounds by Solution of Soap.—Dixon and Bates (London Lancet), following the lead of certain French surgeons employed a 2.5 per cent. solution in water of common yellow soap, or of the soft, green soap of the British Pharmacopoeia, in the treatment of 368 cases of war wounds, representing all types, with the most encouraging results. The solutions were used in the place of antiseptics and applied either as wet dressings, or by means of Carrel's tubes. Irrespective of the nature of the infecting organisms, not excepting the gas bacillus, the wounds almost invariably did well under this dressing solution. The most striking features of the use of these soap solutions were the great reduction in pain, the absence of pus, and the healthy, red condition of the wound surface when the dressings were removed. The solution also had the advantages of cheapness and required a less amount of dressing material.

Traumatic Pericarditis Due to a Needle.—Hall and Wilson (London Lancet), report the case of a girl twelve years old who picked up a rusty sewing needle and put it in the front of her dress. Later on the same day she vomited twice, felt sick and had some pain in her chest. The mark of a needle prick was found on her chest and half of the needle was found still in her dress. Five days later she had slight fever, rapid and shallow respiration, but no pain. Examination showed a much enlarged area of cardiac dullness, precordial friction rub, and other signs of pericarditis with effusion. Radiographs showed a portion of a needle projecting through the chest wall immediately over the heart and at the level of the fourth costal cartilage just to the left of the sternum. Operation, without opening into the pericardium, permitted the needle to be removed. There were no signs of pus or other evidences of infection and the pericarditis rapidly subsided after the removal of the needle. The interesting features of this case seemed to be the occurrence of a pure, noninfective, and uncomplicated pericarditis. It would seem from the symptoms present, which were few and relatively trivial, that pericarditis per se would not account for the usual symptoms recorded in the textbooks as characteristic of this disease, but that the common severe symptoms were rather due to the primary condition which gave rise to the pericardial involvement. Pericarditis is often found post mortem in cases in which no symptoms were referable to the condition during life.

The Control of Venereal Diseases.—The United States Public Health Service has issued a bulletin for the purpose of organizing a nation-wide campaign for the control of venereal diseases. The bulletin states that the control of venereal diseases in connection with the prosecution of the war constitutes one of the most important problems now confronting public-health authorities of the United States. The fact is emphasized that the prevention of venereal infection in the military population is largely dependent on the degree with which these infections are prevented in the civil community. This imposes upon the civil health authorities the duty of forcefully attacking the venereal problem upon the basis of the control of communicable diseases. The Public Health Service in co-operation with the Red Cross and the Medical Department of the Army is establishing venereal clinics in cities in immediate contiguity to the Army cantonments. There is even greater need, it is pointed out, for the beginning of an active anti-venereal campaign in those cities which are outside of the military zones, but into which soldiers go in search of recreation. Most important of all is the education of the general public to the end that this disease group will be considered in the same light as other communicable infections. In connection with this announcement, a plan is outlined in accordance with which it is proposed to make this attack.

Study of Cases Treated by Flavine.—Bashford, Hartley, and Morrison (British Medical Journal), made a very careful study of fifty cases of recent military wounds under treatment with flavine in 1:1,000 solution, and used such criteria as the average date when normal temperature was reached, the average date when the microbial curve reached Carrel's suture standard, the average duration of treatment before the wounds could be closed, and the date of complete healing. They also made careful histological studies of material taken from the wounds under treatment at various stages of their course. Their results showed that flavine treatment was associated with a very small formation of pus; with much slowed epithelial ingrowth; with much delay in all the processes of repair; with a lingering of organisms on the surface of the wounds; and with a reduction in the local and general reaction to infection. The most striking feature of the application of flavine even in this weak solution was the marked destruction of the cellular elements of the tissues of the wound with hemorrhages and thromboses in the vessels deep in the wound and consequent great interference with the normal processes of healing. These destructive effects of the flavine led to the greatly diminished pus production. The results were particularly unfavorable compared with those in similar cases treated by the Carrel-Dakin method.

Microscopic Examination of Nasal Mucus in Leprosy.—Johnston (Philippine Journal of Science), after microscopical studies in several thousand cases, finds himself wholly in accord with the views of Kedrowski and Bayon to the effect that the organism causing leprosy has two stages in its life history, a nocardial or streptothrical nonacid fast form. Nothing is to be gained from the examination of nasal mucus when definite clinical signs of leprosy exist. In the absence of clinical signs, acid fast bacilli in the nasal mucus should not be regarded as prima facie evidence of leprosy. The individual may, however, be regarded as suspicious, and repeated examinations made. The examination of the circulating blood by the method of Smith and Rivas should receive far more attention than it has hitherto received, and is of much greater importance than examination of the nasal mucus. To insure success, the blood specimens in the Smith and Rivas procedure should be taken during the febrile parozysm. Among 248 cases of anesthetic leprosy, in which reliable findings in the nasal mucus would be of actual diagnostic value, only 12.9 per cent. gave positive results. It is therefore concluded that examination of the nasal mucus is of no value as a routine measure.

Treatment of Haemothorax by Artificial Respiration—Hess gives an account of the method of treating early cases of haemothorax by artificial pneumothorax. He contrasts the conservative treatment he followed in the earlier part of the war with the more active treatment he has now adopted in the field. He points out as defects in the earlier treatment of leaving the fluid untouched, the following facts: (1) The patient must remain for a long period in bed, as even sterile effusions of blood take much longer to absorb than ordinary pleuritic effusions. (2) Infection of the haemothorax fluid is very common. Hess has therefore recommended, since the beginning of 1916, early withdrawal of the fluid by puncture, followed by the introduction of nitrogen or of air under controlled pressure. He describes his technique, the chief point of which appears to be that after withdrawing 50 c. m. of fluid by suction, double the volume (that is, 100 c. m.) of the gas is slowly blown in, so as to keep up a positive pressure and collapse the lung. Thereafter 100 to 200 c. m. of fluid are withdrawn, and double the volume of gas blown in to replace it. This quantity is removed again and again, and replaced by the gas, until no more fluid will flow. The lung, he says, may be kept collapsed for as many days as appears necessary, by the reintroduction of nitrogen or air by means of puncture.—British Medical Journal.

Cervical Glandular Enlargement in Children.—Gunson (British Journal of Children's Diseases), concludes that glandular enlargement is evidence of an infective process situated in the lymph tissue specifically drained by such glands. In the majority of cases of chronic cervical glandular enlargement the associated infection is simple in nature and quickly responds to proper treatment, the glandular enlargement subsiding as soon as the infective process is removed. Persistent cervical glandular enlargement in the course of scarlet fever was found to be associated with severe constitutional symptoms and complications which included nephritis and arthritis. When chronic cervical glandular enlargement persists in spite of local treatment of the throat the lymph tissue involved—the tonsils—is frequently the seat of a tuberculous lesion, the glands being secondarily infected. Simple chronic glandular enlargement in young children is associated with malnutrition and alimentary and respiratory diseases.

Irritable Heart and Amebic Dysentery Carriers.—Jepps and Meakins (British Medical Journal), found amebic dysentery carriers in considerable proportion among an unselected series of cases of irritable heart in men returned from the Mediterranean war zone. In many of the cases other intestinal parasites were also present, and at least a dozen cases showed only the small forms of Entamoeba histolytica, which made the diagnosis difficult. Entamoeba histolytica was present in about thirty-seven per cent. of the entire series of cases, but several stool examinations, up to six or more, were often required before the parasites were found. Treatment with emetine bismuth iodide cured about ninety-five per cent. of the cases, and of these fifty-five per cent. showed marked improvement in heart condition. Several forms for the administration of the drug were tried, including the use of stearin coated pills and tablets, but the dry, powdered drug enclosed in cachets was found to be the most effective.

Rectal Crises of Non-Tabetic Origin.—MacLennan (Glasgow Medical Journal), describes attacks of pain by no means uncommon, but the description of which has rarely appeared in medical literature. Both sexes are liable to the attacks. It has been observed in ages ranging from sixteen to fifty. The pain is deep seated and the crisis may come on after defecation, especially after straining, or may wake the victim from a sound sleep. Tenesmus is present, and the act of defecation, though at first it causes an exacerbation of the suffering, results in its cessation. In men there may be priapism. The pains may be so severe as to cause syncope. The pain is usually of comparatively short duration, minutes or hours, and may be accompanied by a general tremor or rigor, followed by cold.

Examination of the rectum during the attack has demonstrated in two cases the presence of a fine fibrillar tremor in the internal sphincter. Piles may be present, and undoubtedly enter into the etiology. A severe type of rectal crisis was recently observed after colostomy in a case of inoperable cancer of the rectum.

The lesion is certainly a neurosis, though it affects persons not of a neurotic temperament and otherwise in sound health. In no case examined during the pain has the rectum been found quite empty, and constipation of a minor degree has been the rule.

The treatment found most efficacious has been the inhalation of a dozen drops of chloroform placed on a handkerchief. Morphine is too slow. Hot rectal douches are rapidly effective, although not instantly available. Crises of pain are not of frequent occurrence.

Ethylhydrocuprein and Opticus Atrophy.—It has been definitely decided that this drug, as exhibited to pneumonia patients in even moderate doses, can cause organic disease of the optic nerve with permanent damage to vision. These accidents may occur in the midst of transitory and functional disturbances. Pincusohn, who saw only severe functional disturbances, simply cautions to limit the dose, but Schreiber, who reports three case of permanent impairment of vision following a period of total blindness (hemeralopia, marked concentric diminution in visual fields), counsels control of vision by the subjective appearances (cobweb spectra, etc.) or slight mydriasis. These, Schreiber says, are danger signals which must be heeded.—Archives Medicales Belges.

Gunshot Wounds of the Head.—Gamlen and Smith (The British Journal of Surgery), say with regard to wounds with one or more missiles retained either in the bones of the skull or in the brain: (a) The missile may be actually arrested in the bone. In some cases the projectile has penetrated the outer table only, leaving the inner intact. A trephine disk has been removed, comprising the outer table with the missile firmly stuck in it, leaving the inner table and a great part of the diploe intact. Both tables may be penetrated, a part of the missile lying firmly wedged in the bone. In one case the foreign body, a thin, sickle-shaped fragment of helmet, an inch in length, had penetrated both tables. Its lower end was driven through the dura for fully a third of an inch, while its upper end just protruded above the outer table. (b) The missile may have passed entirely through both tables of the skull and the dura, the dura still being intact. There have been a number of cases of this variety, which have all been operated on, with no mortality. In certain cases the missile has penetrated the dura and has sprung back, lying between it and the inner aspect of the skull. In several cases in which this has happened the brain has become infected underneath, and the missile has been found at the operation to have formed the cork to a large brain abscess. (c) One of more missiles may be lying in the brain substance at varying depths from the wound of entry. The missile usually forms the base of a cone, the apex of which is at the wound of entry into the brain. This cone is made up of pulped brain tissue and bone fragments of varying sizes. In those cases where the missile is made of lead, say a shrapnel ball, small shreds of its outer covering are shed along the track, and may be seen as glistening white specks. As a result of this moulding process, the ball itself may be very much misshapen. It is interesting to note that the larger bone fragments lie at a greater distance from the wound of entry, and consequently nearer the missile, than do the smaller, and it is quite the exception to find any of these at a greater depth than the missile. Often, if one of the larger of these bony fragments be lying turned on edge, the shadow cast by it approximates to that cast by a small piece of metal, and it may be difficult to determine which of the two it is. They have come across several instances where the missile had penetrated the brain, and lay on or near the bone on the opposite side of the cranium. The foreign body retained was generally a large piece of iron casting. In some instances fractures of the bone were found near the position of the missile, showing the place where it had struck the bone, its momentum not having been sufficiently great for it to penetrate and pass onwards.

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CEREBRO-SPINAL SYPHILIS, AND ESPECIALLY ITS TREATMENT.

By J. Allison Hodges, M. D., Professor Clinical Neurology and Psychiatry, Medical College of Virginia, Richmond, Va.

As illustrating most of the prominent symptoms of Cerebro-Spinal Syphilis, I present to you a rather typical case of Tabo-Paresis.

This case exhibits no unusual symptoms, and the most significant are mainly meningo-myelitic in character, which fact probably justifies a more hopeful prognosis from treatment than this class of cases usually offers.

This patient is a male, 48 years of age, and admits infection approximately eight years ago. This admission, verified since his entrance into the wards six weeks ago, by positive blood and spinal Wasserman reactions, obviates the necessity for detailing his previous family and personal history.

At the time of our first examination, the oculo-cardiac reflex was easily demonstrable, and the patient was mentally dull, and generally apathetic, and spoke only when addressed directly.

He complained of fugitive, lightning-like pains in his back, and his gait was markedly ataxic. He was not at that time suffering from any severe pain, but gave a history of gastric and renal crises occurring at irregular intervals, associated with incomplete girdle pains around the lower part of the trunk.

His muscles were hypotonic, and there was anaesthesia over the inside of the arms and the lower limbs. Tendinous analgesia (Abadie's sign), was also present, and there was "delayed sensation" in the extremities.

The deep reflexes of the knees and ankle joints were abolished, and the Argyll-Robertson pupil was typical.

The patient also suffered from incontinence of urine and feces, and there were several small bed-sores over the lower spine.

Tonight, after six weeks treatment, his condition is substantially the same, but there is some apparent improvement. The incontinence is some better, but still occurs at least daily. Reflexes still persist, but most of the other symptoms appear to be slightly improved.

The patient insists that he is better, and his mentality is apparently not so much impaired as it was on admission, for his mental reflexes are quickened, he is more alert and his memory is improved.

He, however, is still not sufficiently responsive to external stimuli, and does not initiate normally, and is still indifferent and careless about his person and dress.

The bedsores, on the other hand, which at first had a tendency to increase and enlarge and break down, have almost entirely healed, and the tabetic pains and crises have been entirely absent now for more than two weeks, and likewise the ataxic gait has improved, especially the patient's ability to walk when his eyes are closed, and not fall when his base is narrowed.

The proper estimation, then ,of the value of the treatment employed in this case naturally arises, and it is to this feature, that I desire especially to direct your attention.

As is well known, this class of cases of the central nervous system is notoriously rebellious to treatment, although many of them are subject to more or less complete remission in the development of their symptoms.

This single case cannot, of course, be taken as a criterion, or even considered as a satisfactory test of any special method of treatment, but it will serve as an illustration of our purpose.

In the treatment of these cases of nervous syphilis, there has seemed to us that either there was too much dogmatism, on the one hand, or too much variation and want of system, on the other, and consequently there has arisen in the minds of many practitioners, a natural confusion and uncertainty as to the proper course to pursue because of this conflicting testimony by different specialists.

Usually each observer is more or less fixed in his ideas as to the efficacy of a certain method, especially if he initiates it, and it appears to be a fact that in the case of the physician, just as in that of the surgeon, the original discoverer of some special method usually does get the best results from that particular procedure.

It is a fact, however, that a comparison of the results obtained from the old methods of treatment with those from the newer, must convince any impartial observer that the latter are much superior to the former.

It is true that no definite method has yet been inaugurated by any one which has been entirely acceptable, but the therapeutic way has unquestionably been blazed, and the future success of treatment lies in the perfection of some one of the methods utilized in recent years.

The definite aim in all of these later procedures in treating Cerebro-Spinal Syphilis, is to secure results by bringing the spirocheticidal reagents into direct contact with the foci of the disease in the Cerebro-Spinal system, and the remedies are consequently used either intravenously, intraspinally, or intracerebrally.

Neither of these methods has been uniformly, nor even relatively successful in all cases, and this has been the invariable result whether Salvarsan, Salvarsanized serum, mercurialized serum, or other like remedies or combinations were employed.

In early manifestations, especially, of nervous and mental diseases results little short of brilliant have been obtained by each of these methods in some cases, but in advanced cases, if we follow them up long enough, and note the tendency to recurrences, we are forced to conclude that a definitely successful and applicable method of treatment of nervous and mental diseases of syphilitic origin has not yet been discovered, and while we are optimistic, we are not oversanguine, for the close adherence to any one or other particular method of treatment does not seem to be justified by the facts. In our experience, we have learned to expect the best results in the later manifestations of the disease from the employment of different antisyphilitics in different specifically diseased conditions, and occasionally even varying the method of their application.

Our almost invariable rule in recent years has been to use Salvarsan, or one of its congeners, by the intravenous method, and to use it intensively, and we believe that as favorable results as to the clinical symptoms and a normal serologic picture have been obtained, as has been secured by any other method in vogue.

Occasionally, however, other methods and antisyphilitics have been used, but intraspinal medication, which, according to a number of authorities is not always entirely harmless, and certainly frequently attended with pain, has not often been employed, though, in view of the excellent testimony of other competent observers, there may be some cases in which, in the event of failure of the intravenous method, the patient should not be deprived of any further hope by denying him intraspinal medication.

In our opinion, all things conisdered, Salvarsan used intravenously and administered in small doses, frequently repeated, is the best single remedy in the treatment of syphilis of the nervous system, and accomplishes all that can be obtained by the intraspinal, or any other method.

In recently reviewing cases that have been personally treated within the last few years by us, it was apparently in evidence that certain types of syphilitic nervous disease responded most favorably to certain methods of treatment as follows: First, the type represented by the early manifestations of nervous syphilis, which has apparently responded most satisfactorily to Salvarsan (intravenously), and later, mercury by intramuscular injections, or by inunction; second, the type including the later forms of central nervous syphilis of the exudative type (the stage commonly called "tertiary syphilis"), which has yielded most successfully to Salvarsan (intravenously), and later, potassium iodide internally, and injections of albuminate of mercury locally; third, the tabetic type, which has been influenced most radically in an experience of twenty-one cases, by Salvarsan (intravenously), followed by mercury, locally or systemically.

This does not mean that all of these cases were cured, for only two of this number after nearly six years, now appear remain well, but it does mean that the majority of the remainder were materially benefited, especially as regards the tabetic pains and vesical symptoms, only four evidencing no improvement at all.

The meningo-myelitic forms of a tabetic type appear to be most readily benefited by this method, but in a few cases, the addition of intraspinal injections of serum to intravenous treatment of salvarsan has appeared to hasten the elimination of abnormal elements in the cerebrospinal fluid.

The cases mentioned were subjected to from three to twenty-two treatments each, and in every case, it is advisable to continue this intensive method until the cerebrospinal fluid is normal, and remains so.

Homer Swift contends that there is a

certain number of these cases, however, which show a satisfactory response to intraspinal treatment only.

In other types of nervous syphilis, notably paralytic dementia and the spastic forms of spinal paralysis (especially the Erb type), the response to treatment by any of these methods has been disappointing, and the only benefit obtained has been an increase in the number and length of the remissions and the apparent retardation of the disease.

According to the reports of recent observers, for example, Evans and Thorne, who used the intraspinal method alone in twenty odd cases of paretic dementia, their conclusion was that it was of "little or no therapeutic value" in this series.

Likewise, Dunton and Sargent report results in eighty-eight cases of paresis which are not particularly encouraging, though in ten of this series treated by the Swift-Ellis method, it was thought that the duration of the disease was cut to about one-half as compared with cases treated by older methods.

On the other hand, Graeme Hammond, Norman Sharpe and Wheeler Smith are much encouraged by the excellent results obtained by them in eleven cases by injections of Salvarsan into the lateral ventricle in the early stages of paresis.

These reports prove that some cases of nervous syphilis do not respond to any treatment, and that others may respond, and then relapse, and thus demonstrate that unfortunately, our modern methods, while usually of great value, are yet not satisfactory in all cases.

In general, the lesions due to inflammation or exudation are much improved or are eliminated more speedily and radically by the more recent methods, and quite as expeditiously and efficiently by the intravenous as any other, but those conditions due to specific degenerations are little, if any, affected by any method so far employed.

The case here now under consideration presents an interesting question of prognosis and the utility of further treatment when the comparative symptoms, as detailed in the beginning are considered.

The patient has just received today his fifth intravenous treatment of Diarsenol, and while the results, especially as regards the bedsores and ataxia, are encouraging, yet there is no very appreciable improvement otherwise.

If, however, there is further improvement, or even the present status is maintained, additional treatment will be given according to the future evidence of improvement as demonstrated by the blood serum and the spinal fluid of the patient.

This case, also, with its apparent present improvement, suggests again the contention that has arisen recently as to the efficacy of the intravenous as compared with the intraspinal method of treating these cases.

Bernard Sachs who admits being one of the earliest victims of the fascinating theory that intraspinal medication was the most direct method of reaching the disease-foci, now confesses to a change of mind because his later clinical experiences have taught him that intravenous treatment, in small dosage and repeated at frequent intervals, produces results entirely satisfactory and at least comparable with those obtained by intraspinal medication. He claims the procedure is safer, and that the old doctrine that the choroid plexus was impermeable, and that salvarsan introduced intravenously, could not be expected to reach the cerebral or spinal tissues had to be abandoned because his clinical experience taught him the reverse.

He further contends that all recent physiologic experiments appear to show that a metallic substance like salvarsan or salvarsanized serum, even if introduced into the spinal canal does not remain in the cerebrospinal fluid for any length of time, but is rapidly absorbed into the venous system, and hence this circuitous route by lumber puncture is no improvement, even if it be the equal of the intravenous method. Furthermore, the antisyphilitic remedies cannot be given so intensively, frequently ten to thirty or more injections, by the intraspinal method, because such treatment would prove most disagreeable, if not harmful to the patient.

Personally, our experience with the use of the other different sera that have been employed in the treatment of these cases has been too limited to be of clinical value, but in a comparison of mercurialized serum and salvarsanized serum David A. Haller states that the irritating effects in the spinal canal of serum to which mercuric chloride has been added in the dose of 0.001 gm. is greater than that of 20 c. c. of salvarsanized serum separated from blood drawn thirty minutes after a dose of 0.6 gm. of salvarsan, and that the average effect on the laboratory findings in the spinal fluid from one dose of mercurialized serum is greater than from one dose of salvarsanized serum.

He also states that unpleasant symptoms are more common following intraspinal mercurialized serum than following salvarsanized serum, and that the greater irritation of the meninges from mercurialized serum prevents as rapid repetition of dosage as is possible with salvarsanized serum.

Cases of general paresis, meningitis and cerebrospinal syphilis stand intraspinal treatment with mercurialized serum better than do cases of tabes dorsalis, and it is particularly in cases of active syphilis of the meninges that the mercurialiszed serum is useful.

Mercurialized serum, according to his experience, and as edited by Dix, has an advantage over salvarsanized serum in ease of preparation and in its keeping qualities, and for these reasons, it can be used under clinical conditions in which the use of salvarsanized serum is impossible, or at least very much more difficult.

Eleven patients previously treated with salvarsanized serum were each given by him three or more intraspinal treatments with mercurialized serum, a total of thirty-eight doses. The effect on the Wasserman reaction, cell count and clinical symptoms was in every case equally as good as, if not better than, from the same amount of salvarsanized serum, but the reactions in every case were more severe than with the salvarsanized serum.

Such testimony as has been given, proves finally that the treatment of Cerebro-Spinal syphilis is yet a **quaestio vexata**, but progress has been made, and greater advances are yet anticipated.

At present, intravenous medication by Salvarsan in small doses, 0.04 to 0.06 gm., and repeated every four to six days until (if possible), the serologic picture is normal, offers all the advantages that any other of the recent methods has demonstrated, in my experience.

I prescribe large quantities of Tongaline for many conditions for which it is particularly indicated, but I obtain especially gratifying results from its use for what are commonly called "colds," the symptoms of which are chills, fever, sneezing, coughing, etc., and for which the system requires, first of all, prompt and thorough elimination.

PRESIDENT'S ANNUAL ADDRESS, DELIVERED AT THE PINEHURST MEETING OF THE N. C. MEDICAL SOCIETY, BY DR. I. W. FAISON, CHARLOTTE, N. C.

We are happy to be here with you today in this famous resort, Pinehurst. Known not only throughout the United States, but other countries. A wonderful vision came to Mr. James W. Tufts, while he was locked up in the cold frigid East. Out of this vision came the preparations of this wonderful resort. Mr. Leonard Tufts, a worthy son of a worthy sire caught up this vision and has fully developed the real wonder of our state. He places the key of this resort that unlocks all of its mysteries into my hands, and asks me to extend to you further welcome to its pleasures.

My Medical Brethren, I take great pleasure in tendering you my heart felt thanks for bestowing this honor, the Presidency of the North Carolina Society upon me, the highest honor that you can give. The responsibilities are heavy and many, and worthy of the best efforts of the most matured men within our ranks.

The absorbing interest in the nation's mind today, is preparedness; hence, I felt it would not be amiss to speak to you today of one of the special branches of preparedness, this being the conservation and welfare of our children. When we stop long enough to fully grasp the meaning of this awful world war, where men are killed by the thousands, yes hundreds of thousands—we realize that their places can only be filled by growing more children. We well know now how high the death rate of these little ones is. In America alone, at least three hundred thousand died last year. We also know that a great many of these died from preventable diseases, and these came about to a great extent from carelessness and absolute ignorance on the part of their mothers. Still there are worse things than death. We as medical men, and especially the pediatrist among us must look with more concern for the betterment of these children. We can and must bend our energies that the girl babies shall grow and develop into magnificent forms and attractive beauty, and the boy babies into splendid and strong manhood. I can't conceive the idea that the great Divine Creator ever intended that His created creatures should fall so far below perfect womanhood and manhood as we so often see. Still when we look around and about us daily, we see these little deformed and helpless ones. The young of other kinds don't impress us in this way. This very fact must force the responsibility of the human young upon us—still we know that the human young is the most helpless and dependable on other things than any of the young of all other kinds.

This has its meanings and responsibilities. No man was created to be eternally lost, but left as free agents to accept his own destiny, so also we as human beings were created with the power to think, to reason and to act. The responsibility was placed upon us to take the human young and so direct them that they should come into the full possession of well developed bodies and trained minds. You fully realize the universal fact that the greater percentage of the babies born are along the lines of perfection at their birth.

Gentlemen, this responsibility is great, and growing greater. Just for a moment let your minds compass the results of this awful, devastating, cruel, murderous war—million of men or more dead. How many millions more to die or ruined, no man can say. Women ruined, children maimed or driven by starvation to utter undevelopment or death. This is an awful picture, but has the half been told? The subject of birth rate is beginning to worry the powers in authority. Man power is waning too rapidly. Men are publicly speaking from our platforms, even in this country advocating that our women should marry at once and shoulder their part of the war responsibility as to future preparedness if there should be another war in the future years, which most probably will be, for the specific purpose of increasing our birth rate. I am glad to say that we can point now with some pride to the existing birth rate in our own State. Today it stands higher than the birth rate of any other State in this country. This may mean that it is because our people are poorer—it may mean that we are more American than any other, which I think is true. We stand out pre-eminently ninety-nine per cent. true natural born Americans.

In my time I attended professionally a poor fellow's family, composed of himself, wife and eight children. Again I was called to be present at the birth of another baby. I was so engrossed with the thought as to how he fed and clothed them that I seriously asked him why he continued to add to his already house full of children? Won't you try to put a stop to any further increase and greater responsibilities? His reply still rings in my ears—"Why Doctor, children are the only things I can have on a credit.

When shall this work of conservation and better welfare begin? Shall we start at the prenatal or even further back to the premarrital period? The premarrital period seems almost uncontrollable. My experience in life has been that when a woman and man decide fully in their minds to marry, certificates of health or parental permission will not stand in the way. We can do much during the prenatal stage. "Every child has the right to be well born." A well poised, healthy happy mother with a perfectly formed beautiful baby is a most wonderful picture. To this momentous end, environment and medical men, especially the obstetrical men should leave nothing undone. At the very threshhold of gestation this special overlooking should begin. The prospective mother especially during the first gestation should be under the guiding hand of an obstetrician. She is ignorant of conditions as they will arise, she should be directed all along that the arising and developing conditions may be explained to her and made as easy for her as possible, that the on-coming off-spring may reach the goal of perfection. Special and perfect advice will add much to this end. Her diet, exercise and perfunctories must all be directed properly—what foods to eat and when certain foods prohibited. That she may avoid some of the most awful and serious conditions for self and baby. The time for parturition at hand, the first time especially is frought with many, many dangers, and wonderful responsibilities both to mother and child. The most important step now is the employment of an educated, trained, sympathetic and patient obstetrician. From unavoidable conditions in life this cannot always be obtained.

The medical profession in this State should combine its efforts to induce the medical schools everywhere to see to it that our medical students are more thoroughly taught, and specially trained in this special branch. Not only in the lecture room, but by bedside teaching and practice.

Just a few years ago in the A. M. A. Journal, Prof. J. Whitridge Williams, Obstetrical Professor, of Johns Hopkins, boldly attacked the teaching of this special branch of medicine, demanding better teaching. He stated that only one or two schools that pay just and proper attention to this branch, and that unfortunately his school was not one of them. He went further to make the unqualified statement—that instead of an education, well prepared medical obstetrical profession, that we had a body of men midwives. This is an awful accusation. Is it true? That a man to be an obstetrician in the true sense of the word should be able to make a correct diagnosis of the conditions of the pelvis, the exact position of the oncoming child, should decide scientifically what was to be done, he should be able judiciously and scientifically to properly apply and use forceps, should be able to form versions, correct all malpresentations, should be able to do properly, cesarian section, should be prepared for sudden blood transfusion, should be able to repair aseptically and surgically any unfortunate and unavoidable traumatisms during parturition, and should be able to direct the care and handling of the baby. Was he right or wrong? What is the verdict of our profession as a whole throughout this country? I am of the opinion that I fear this charge is too true. The infant now is at the threshhold of life, it now depends on us to care for it. It was created to make a handsome, well formed man, or a beautiful lovely woman.

True conservation and best welfare begins with mothers trained and educated and willing to give them aid. I am now able to say this is true with most of our own mothers. With good prenatal gestation the future of the population of our beloved State will be nothing short of the best. The State acted wisely and well when she demanded midwives to register; that a solution of the silver salts should be distilled into the eyes of every newly born child. We too well know that gonococci dwell in the palaces as well as the hovels.

The result of neglect here is too awful. A human being perfect in every other way wending his way through life with one eye, often with no eye. We must realize that the estimation based on the best date obtainable is that one out of every eight babies born, one dies during the first year. If our vital statistics were better recorded and fully reported, I fear it might be, even worse than that. This may or may not be true. Still I know that we should demand laws that would give us a perfect vital statistics in this State. This waste of our children is preponderous and even worse when we are forced to acknowledge the fact, that at least one-half of them die from preventable causes. These bare facts stare us squarely into our faces and charge that we are particeps criminis to this shameful neglecting of our full duties to these little ones, or we must plead the baby act of ignorance.

Not only is this true to the death rate, but still further; deeper and more appalling is the lamentable fact, that so many suffer from unnecessary sickness, leaving them marked and handicapped for the race of life as set before them, which are preventable. United efforts are being made to meet them and do away with these conditions. Statistics show us yearly the reduction of this death rate and the betterment of the child. Place after place, the death rate has been reduced to fifty per cent.—we can do the same. We must do the same.

Gentlemen, and especially the Board of Health, the time has come when the laws as to health should be re-written. We have progressed far enough along the lines of contagion and infection to have more specific knowledge and give better advice. We realize fully that the younger the child the less force that child resists any kind of sickness, therefore by law and by every intelligent means they should be protected, both by education of our medical men, our mothers and fathers and our school teachers.

The subject of quarantine and isolation is exceedingly important, and should be taught thoroughly and demanded by law. The infectious diseases including the ones that are contagious are now so well understood that we can classify and explain them so our people can understand them. Education along this line will be the means by which all objection to proper regulations can be eradicated.

We know today that measles, German measles and chickenpox are air-borne diseases, that smallpox is both air-borne and a contact disease. That Scarlet fever is a contact disease, and if air-borne, but slightly so.

These facts enable us to class them so that we can re-write our laws on the statute books of this state to a better purpose. All five of these diseases are certainly transmissible from the first prodromic symptoms. During this period the spread of these diseases is at the highest. We have no record that the first three—measles, German measles or chickenpox, is carried by a thrid party unless going out of the bed with a person affected and getting into the bed with a non-immune. Smallpox and scarlet fever can be carried by a third party or many other objects.

The contagion in the first four being air-borne, close contact is not necessary. Scarlet fever not air-borne, but a contact disease, must be cared for in a different way.

The transmission period in the first three diseases begins at the first prodomic symptoms and last in full effect till the temperature drops to normal and the rash begins to fade, not completely gone.

The transmission cause now rapidly wanes. The younger the children the more serious are all these diseases, and everything possible should be done to prevent them.

I think the period of isolation in the first three should be fixed in new statute to fifteen days from the first symptom of manifestation. I think a card should be as now put up at every house, but simply to notify outsiders not to go in. The patients should be isolated solely for the purpose not to aid in spreading the diseases. The spread of these three diseases is in the patient perse. For scarlet fever and smallpox I am heartily in favor of a rigid law of quarantine, which should demand complete isolation and rigid quarantine. In both of these diseases the minimum period of quarantine should be six weeks, and longer at the discretion of the physician and health officer.

For the communicable diseases the conditions change. Mumps, transmissable from onset and till the swelling of the perotids subside, should be isolated and placarded fifteen days.

Whooping cough both airborne and contact. One of our fatal diseases for children under two years of age—transmissable from beginning of the catarrhal stage, a week or ten days before we can make a diagnosis, and until the peroxismal stage has passed. Especially in the beginning of an epidemic, after the epidemic commences every case with the so-called cold should be considered whooping cough. Isolation, both of the patient and the exposed children should be absolute till at least fourteen days have passed. A card should be put on the door and both the case and the exposed isolated. This should be rigidly kept on six weeks, and continued until the cough ceases. This is one of our most fatal diseases in childhood, therefore we must not play to the whims and weaknesses of our patrons. The law should be fixed and a penalty imposed for not obeying it.

The vaccines gotten up by the different biological houses, in my hands, have proven in the majority of cases very beneficial. The use of them has not met with general favor, I admit. I am of the opinion that doses given are not large enough —nor is it given early enough. My initial dose is (250,000,000) two hundred and fifty million the first day; (500,000,000) five hundred million the second day. Then every two or three days 1,000,000,000 for 6 or 8 days or even more. I give it in every case, from the youngest baby on to adult life. I am of the fixed opinion, if by any carelessness a young baby is exposed and contracts whooping cough, that it would be nothing short of criminal neglect.

Diphtheria in the past was one of the most fatal diseases among children, and added greatly to our mortality rate. It is a contact disease, transmissible from the beginning of the exudated membrane until the membrane disappears, and until three reports of negative cultures from both throat and nose made 3 days apart. Complete isolation and rigid quarantine of the patient during this time should be inforced.

The discovery of antitoxin has been a wonderful boon to the children, and has reduced the death rate by the thousands. It should be given early and in larger doses than a good many give it. In the great majority of cases (30,000) thirty thousand units will cure most of the cases. Quite a mooted question exists in our profession whether to give it to every exposed child in a family of children where one has the disease, or not. The chick test will show the ones hypersensitive to the disease, and of course, these should have the prophyllactic dose. Those that show that they are immune by natural causes, should not be given antitoxin. The nightmare of anaphyllaxis lurks in every person, sudden and fatal results have followed small prophyllactic doses. A warning to the wise ought to be sufficient. Always take in consideration this awful danger.

Tuberculosis, the great white plague. The disease that adds many to our death rate yearly is a preventable disease. The cause is locked up in the sputa or its droplets, therefore the individual per se is the danger source. Before (4 or 5) four or five years of age most children contract this disease. The safest and easiest way to make a diagnosis at this time is the skin test with old tuberculin known all over the world as the Von Pirquet test.

We are led to believe now that about one child out of every ten has this disease or is hypersensative to it. This test will prove the condition. Therefore I believe that it ought to be compulsory to have every child tested before five and all who show this hypersensative condition should be treated with tuberculin. If this were thoroughly carried out I feel that within three generations we would be free from this awful plague.

Such wonderful progress has been made in perfecting the plans of feeding children during infancy and after infancy, that the death rate during these periods has been markedly reduced. We too well know that during infancy nothing equals the milk of a healthy mother. The past few years has shown that the mothers are more willing to nurse their babies, than before for a long time. No infant should be taken from the mother's breast until it is absolutely proven that the milk will not answer, still about six or seven months is the average time for them to furnish sufficient amount of milk of good quality. It then becomes exceedingly important and rather easy to do. Where the supply of milk is totally inadequate, or altogether absent we are taxed to supply the necessary amount with proper quality. There is really no ordeal more trying to the pediatrist, a life in the balance first and foremost. Also that this supply shall meet the demands both to hold on to this life and supply an amount both in quantity and quality to meet every demand that nature makes that the baby shall grow, coo and develop to the fullest extent, with the first object toward making a full man or woman for the future. While this period seems important and weighs so heavily upon the immediate period just following infancy is just as important, or even more so.

This growth and development must continue with regularity. Milk though good and very important, cannot entirely supply the demands of nature. Perplexities of serious and dangerous proportions daily tax us. Waste and growth, two task masters are at our heels all the time. We must know what has to be done, or walking epistles of our ignorance will stalk the streets proclaiming our ignorance, or criminal neglect.

Still medical men who would call in a surgeon, and obstetrician, a nerve specialist, or an eye and throat man, will hang on to these children, blindly leaning on nature for help till the child is dwarfed, distorted, or ruined for life.

If it is possible for me to arouse interest in these little ones so that the benefits I hope for shall come to them, I shall feel more than paid.

APPENDICITIS IN CHILDREN.*

By J. F. Highsmith, M. D., F. A. C. S., Fayetteville, N. C.

There is no surgical subject which has received more attention nor has there been more valuable papers read and discussed than in this disease—Appendicitis.

From the first recorded case of the disease of the appendix in the Classical Case of Mestivier reported in 1759, of Kronlein and Milkulictz in 1884, with the contention of the priority of the operation by Thomas G. Morton of Philadelphia in 1887 as well as that of Sir Frederick Treeves about the same time, all is of interest to us from a historical standpoint. Scarcely a surgeon of notoriety but has had something to say about this disease, among these McBurney, Fowler, Darborn, Eddyboles, Deaver, Mayo Robson and countless others.

It would seem that so much has been written on the subject that there is little left to be said. If, however, one may be allowed to record his impression from personal experience in a very important phase of the condition "appendicitis in children" which I have selected as my subject, let us hope that it may at least furnish the basis for an interesting discussion. Even though it has been considered as a very simple procedure to operate for this disease, and indeed it is simple when operation is performed at the timely moment, but when the golden opportunity, the hour for operation has passed, I contend there is no surgical problem which confronts us today which becomes more complicated and gives us greater concern. This is especially true of appendicitis in children.

To determine the earliest age at which appendicitis has been known to occur in the child has been a matter of much interest to the investigator. In my own personal experience I have found this disease extremely rare under the age of five, but that it increases in frequency after this age. It occurs as often between the ages of ten and fifteen as it does in later life. The causes operating to produce the disease in children are much the same as those acting in adults. It has been my lot in the last few years to have referred to me many cases of appendicitis in children, almost invariably the appendix has ruptured and a mass has formed before I see the patient. The child has been sick for a week or ten days before being referred for operation. If this paper serves no further object than to appeal to the general practitioner and through him to the parents for a closer co-operation to give the child with the "stomach ache" a better chance to live, then this poorly written paper will have at least served a purpose. I recall a case operated on a few days ago where the operation was timely, made so from the fact that this father had brought a case some years ago in a little boy eight years old with a ruptured appendix—peritonitis—too late for operation.

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*Read before the Pinehurst meeting of the North Carolina Medical Society.

Were the diagnosis in infants not so difficult, I have no doubt it would be found that many cases of gastro intestinal disorders had there origin in but a small portion of the intestinal track, namely the appendix vermiformis.

From an anotomical view point this disease in children should be diagnosed early. Frequently a child that has been in most excellent health, whose general appearance indicates no disturbance, nutrition good and who is in no way suffering, suddenly develops a most violent attack of acute appendicitis. How can this be explained? Ochner gives as an explanation that the appendix of these children is usually large, but the secal end is much the narrowest portion of the lumen. This favors the formation of an enterolite, which eventually either obstructs the secal end of the lumen and brings about an acute appendicitis or it causes an ulcer, resulting from pressure necrosis, with the same ultimate result. In many the messentary of the appendix is very short, which still further facilitates necrosis of the portion projecting beyond the end of the messentary, because in the case of the thrombosis of one of the vessels in this portion there can be no compensotory circulation, while this can readily be established when the messentary extends to the end of the appendix.

Omentum in young children is very small and not substantial, hence it cannot be of as much use in separating the diseased appendix from the general peritoneal cavity as in the adult, consequently it is necessary in those cases who come too late for an early operation to watch in suspense from day to day waiting for the best time to drain or not drain.

Unfortunately appendicitis in children is usually looked upon by the parents and friends, and frequently by the physician, as a case of violent acute gastritis or enteritis resulting in indescretion in dieting. Indeed, in most cases the little patient has eaten a most unreasonable amount of some indigestible substance. This is so common that one rarely sees these cases in whom the correct diagnosis was made from the beginning of the attack.

The disease in children advances much faster than in the adult. A gangreneous appendix may be looked for in sixteen to twenty-four hours after the onset of the disease—this further makes it more imperitive for early diagnosis and early operation. How are we to know the condition in time? This is the question. There is a general consensus of opinion that the symptoms in children are often very vague and lack the pointed precision of the adult which so frequently forces a diagnosis even upon the lay mind.

We must remember that the abdomen of a little child is but a miniature of the adult in the relative approximation of all the organs, and in close continuity with those in the pelvis and the upper abdomen. As it is often impossible to elicit a clear statement as to the exact seat of pain, the physician or surgeon must often depend on palpation watching the face of the child at the time while the attention is diverted. Then as to how the story of the case runs as the lamented Murphey taught in his clinic. We will sometimes find an unmistakable history of recurrent appendicitis, manifested by vomiting alone, abdominal symptoms and fever being entirely lacking. No examination of the child with a suspected appendicitis is complete which does not include the examination of the thoracic organs. Often the first sign of pneumonia is a right iliac pain liable to be mistaken for appendicitis.

As a rule the onset of acute appendicitis in a child comes with suddenness and severity. The patient gives every evidence of being quite ill and even comparatively mild lesions give marked reaction and temperature, pulse and leucocytosis. Leucocytosis is of value as a confirmatory symptom. If the patient reacts well to the infection the white blood count will be high. If on the other hand the system is overwhelmed by the invasion the number of leucocytes may not be increased from the normal.

Great stress has been laid upon the fact that most cases of appendicitis in children is often produced by gastro-intestinal disorder. Where a child has repeated attacks of colitis and gastro-intestinal disorder, especially if tenderness is found on the right side of the abdomen, appendicitis should be suspected until the contrary is proven. Fever in appendicitis in children is apt to be higher than in the adult. Rectal examination should never be neglected where we suspect appendicitis in a child as it is of the greatest importance in the differential diagnosis of the disease.

The principal condition which may be confused with appendicitis are, pneumonia, pyelitis, typhoid fever and intestinal obstruction. Pneumonia gives a leucocytosis even higher than appendicitis, so the blood count is not a differential point; but a diagnosis of appendicitis in children should not be made without a careful examination of the chest. Inflammation of the renal pelvis is a particularly confusing possibility when pus is found in the urine in a suspected case of appendicitis.

On the one hand we realize that pyelitis may exactly imitate the clinical syndrome of acute appendicitis. On the other hand we know from abundant experience that pus, blood, albumin and cast may be found in the urine of a child suffering with appendicitis as the primary condition. If the child's illness is due to pyelitis alone the amount of pus is usually greater than when it complicates appendicitis. But the order of symptoms, pain, vomiting, tenderness over McBurney's point possibly a mass can be felt, are very characteristic symptoms of appendicitis. If possible get a blood count as leucocytosis is the most constant symptom. Early diagnosis and early operation are the key-note where appendicitis is suspected in a child or in an adult, as for that matter, remember that purgation means perforation. In our experience administration of purgatives in the early treatment of appendicitis, has done more harm than any other factor connected with the disease. If a child has stomach-ache and you are suspicious of appendicitis, for mercy's sake do not give it a purgative, but rather give it an enema, apply ice cap over the appendix and nothing by mouth, try this and consult a surgeon.

As we have before said most cases have been sadly neglected and brought to us for operation when the forty-eight hour limit was passed, consequently the conditions are complicated. But happy to say this does not hold true with appendicitis in adults as the profession has become educated. Seldom do we see an adult where the neglect has been due to neglect of physician.

The following which I report from a series of cases will illustrate in a brief and practical way conditions as they have come to us.

Case No. 9228—Male, age 13, entered the hospital at mid-night, gave a history of twelve hours prior to coming to the hospital patient had general colicky pains, rigid in region of appendix with nausea and vomiting. Temperature 101 F., pulse 130. W. C. B. 14,000. Operation advised and performed, acute appendix removed, wound closed without drainage, patient made an uneventful recovery, discharged from hospital on the fourteenth day.

Case No. 9108—Female, age ten, gave a history of being sick seven days before coming to hospital, pain in abdomen with general colicky pain throughout, vomiting with high fever, pain settled in right side around McBurney's point. She was given purgatives, kept in bed and treated for bowel condition—entering the hospital one week after her first sickness. At the time she entered the hospital her temperature was 100, leucocyte count 18,000 with a very definite mass to be felt in right side. She was placed in bed, nothing by mouth, ice bag over her right side, Murphey drop saline given per rectum one hour out of every four, temperature 103 F. Eight days from time entered hospital mass had subsided, temperature was normal and she to all appearances on the road to recovery. Here I had two conditions confronting me, e. g., one to discharge her from the hospital, send her home and await a future attack; another to advise operation. In this particular case we decided to operate, made a right rectas incision, found a post secal appendix densely bound down with many adhesions about it, had sloughed from its secal attachment, tissue highly vascular, bled very profusely. We wished that we had not attempted the operation, however, the appendix was removed as best we could, or what was left of it was removed and drainage established. This child went on to recovery being discharged from the hospital on the 20th day after the operation. Wound healed and to all appearances in good condition. This case I felt while operating, had I known the condition it would have been as well not to have operated as the mass had disappeared and to all appearances on the road to recovery.

Case No. 9132—Admitted to hospital stating that one week previous had pain in stomach, nausea and vomiting soon settled in region of appendix, since this time confined to bed, rapid pulse, with soreness over region of appendix, a mass suspected though the muscles were very rigid and it was hard to be sure about this. On the second day after entering the hospital rectas incision revealed post secal appendix with abscess walled off at the distal end of the appendix under the lower border of the liver, appendix had ruptured at the tip same was removed, drained and patient placed in Fowler position with Murphey saline drop one hour out of every four, considerable drainage followed slightly fecal for a few days. Patient left the hospital twenty-four days after operation, condition good.

Case No. 9117—Child nine years old extremely ill for a week. The day before coming to the hospital the parents had given the child a dose of calomel followed by castor oil, sent for a doctor, as the pain was so acute case was referred to the hospital. On entering found abdomen absolutely rigid and distended, vomiting, rapid pulse and all the symptoms which go to make an alarming condition. Operation performed at once, appendix found to be ruptured, abdomen filled with pus, stump of appendix tied off with catgut, median drainage over pubic also in lower angle of wound, stomach large. Child placed in Fowler position, Murphey drop. Though extremely ill, reverse peristalsis, continued stomach lavage, child made a slow recovery.

Case No. 9237—Male, eight years old, had been sick for ten days, decided mass in right side, unquestionably appendicial abscess. This case was placed in Fowler position, nothing by mouth for four days with ice bag over right side at which time the mass had just about subsided, then for four days it was given four ounces plain egg albumin water every four hours with purgative dose of castor oil on fifth day. At this time its temperature was normal and mass had disappeared. Parents were advised to take the child home without operation with a promise that they would return within twelve hours after the time it was taken sick provided he has a future return of this condition.

Case No. 8970—Child, seven years old, extremely ill for a week, brought to hospital in a most desperate condition, abdomen rigid with localized mass around McBurney's point, reversed peristalsis, vomiting, rapid pulse and all symptoms which go to make an alarming condition. Against my best judgment, but anxious to give the case a chance, operation was performed and on the second day after entering the hospital. Appendix found to be gangreneous, ruptured and was poorly walled off, appendix removed, abdomen closed, patient placed in Fowler position with Murphey drop. The pulse became weak and thready, no bowel movement, the stomach lavage used daily, but on third day after operation the child died.

These cases which I have briefly reported I hope may draw a picture in your mind which co-operates with your experience in similar conditions.

In conclusion, remember that appendicitis in children is as common as in the adult. Do not mistake appendicitis to be errors in feeding, indigestion, intestinal colic, etc. Avoid purgatives, especially calomel when you suspect the child to have appendicitis, as strong purgatives undoubtedly causes perforation and general peritonitis. Early diagnosis and prompt operation and we have but little to fear for our patient's safety.

The Pneumonia Convalescent.

In spite of all of the modern advances in scientific therapy, and the improvements in the general handling and management of acute infectious diseases, Acute Lobar Pneumonia still deserves the title ascribed to it by Osler: "The Captain of the Men of Death." There are, however, especially during the Fall and Winter months, many cases of the lobular or irregular Pneumonia that so often complicates or follows La Grippe. When this condition supervenes it is more than likely to follow a subacute or chronic course and convalescence is frequently long delayed. Under such circumstances, in conjunction with treatment designed to hasten resolution, a general blood tonic and vitalizing agent helps materially to shorten the convalescent period. Pepto-Mangan (Gude) is of much value in this field, because it not only increases the solid elements of the blood, but also acts as a tono-stimulant to the organism generally. As Pepto-Mangan is free from irritant properties and constipating action, it is especially serviceable in the reconstructive treatment of the devitalization following the Pneumonia of the aged.

SECONDARY OPERATIONS IN THE ABDOMEN.*

By George Wm. Pressly, M. D., F. A. C. S.,
Charlotte, N. C.

Among the unpleasant things the operator may be called upon to do is to reoperate on his abdominal case. It is not only unpleasant to the doctor but exceedingly dangerous to the patient. It is one thing to operate on a patient who has been carefully prepared, whose bowels are clean and flat and whose kidneys are in good shape and it is quite another thing to operate on the same patient when the abdomen is much distended, whose bowels have not moved thoroughly in a week and whose kidneys are more or less completely blocked up with waste material. But at times such operations may be necessary to save the patient. They must be done quickly but not hurriedly, under very light but sufficient anesthesia. They should be done promptly but not unnecessarily. In some cases local anesthesia is best but if the patient is very nervous and apprehensive a light general anesthetic is best.

Among the things that call for a secondary operation may be mentioned: Hemorrhage, Infection, Obstruction, Fistula and Sinus, Hernia, Continued pain, Left ins.

Hemorrhage may be acute or oozing, the first is very active and requires very early operation, the second is slowly forming and acts oftentimes mechanically and can be operated on at a later time. Such oozing in the wound may be the cause of non-union and require operation to clean out the clot to allow the raw edges to come together. Fortunately hemorrhage is not a very frequent cause of secondary operations at the present time, the avoidance of mass ligation or the use of the double ligature when mass ligation is done or the separate ligation of the vessel itself has practically done away with secondary hemorrhage in the abdomen. In operating for hemorrhage we should locate the bleeding vessel or point in the abdomen before going in if possible to do so and the work done with this one point in mind.

Infection is a more common cause for reoperations as unfortunately we can not prevent it or the patient goes to the first operation with the abdomen more or less full of pus. The serious secondary condition may be due to imperfect drainage at the first operation or extension or pocketing of pus. The difficulty of draining the abdomen in diffuse suppurating peritonitis is well known and in such cases we may expect to have late trouble. Infected tissues about the appendix or in the gall-bladder region and anywhere along the intestinal tract especially along the large bowel when distended with fecal masses as may happen in gun-shot cases may give way very easily and allow leaking at the line of suture. Such leaks develop about the fifth day when every thing had been going well up to that time.

Infection and hemorrhage may be combined as when a vein is pressed upon by a drain or a ligature cuts through too quickly. Postural or drainage at the most dependent point is the best solution of these cases. In the male the supra-pubic and in the female the cul-de-sac drain is the proper thing to do. Certain mid-line collection of pus may only be drained straight up through the general cavity and in these the chances of later trouble is very great.

Obstruction is the most urgent and possibly the most common cause for a second operation, it may be partial or complete, may come on suddenly or slowly or the complete may gradually pass into the partial or chronic. In the complete cases the treatment is definite and is done promptly, in the partial we may lose very precious time by waiting as there may be some movement from an enema or some gas may force its way through under pressure. Obstruction may be caused by improperly placed or too bulky drainage, adhesive bands, general infection, or from the condition of the bowels at the first operation as in gun-shot wounds. The characteristic symptoms are well known, distension, vomiting soon becoming fecal in the complete cases, pain, pulse fast and thready, facies abdominalis marked. This last symptom is a very important one and Dr. Charles M. Strong of Charlotte places great emphasis on the facial expression in such cases. Temperature is not a safe guide at all. It is most frequently subnormal even in cases due to infection.

The treatment may be enterostomy, breaking up adhesions, and resection. We may do either one of these or any two or in some cases all three. In most cases enterostomy is the best and safest thing to do. Obstruction even when purely mechanical is dependent upon the pressure above quite as much as the band or kink. We see these cases clear up from a simple drainage of the bowel above the point of obstruction when nothing is done to the adhesion at all. Breaking up adhesions may tear the bowel and resection takes too much time and is attended with too much shock to be very safe in the severe cases, while an enterostomy can be done safely and very quickly. The operation has been standardized by Major John W. Long of Greensboro so that the details can be carried out in the shortest possible time. In the greatly prostrated and almost moribund case enterostomy is the only operation that should be attempted. In some severe cases even a second enterostomy may be done in perfect safety and for the great benefit of the patient. A young man obstructed five days after an operation for a badly adherent retro-cecal appendix, an enterostomy was done on the seventh day with temporary relief; seven days after the enterostomy complete obstruction was again evident, Dr. Robert L. Gibbon was called in and to my surprise advised another enterostomy, this was done with the breaking up of some pelvic adhesions, the patient made a splendid recovery and is now selling tobacco all over North Carolina in a Ford. In certain cases where the possibility of obstruction is very great the enterostomy may be done at the primary operation, this gives the patient a very comfortable healing period with a flat abdomen as all gases and toxic material pass off as soon as formed if they form at all. The enterostomy wound heals very quickly when the tube is removed.

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Fistula may be fecal, biliary or urinary. Any one of these may heal spontaneously after a period of time. They may be due to sloughing, slipping of suture, nicking, inclusion of mucous tract in ligature and to stone. Sinus usually means foreign body, thread or large knot, fecal concretion in the depth of the wound, and very thickened sac wall.

Hernia usually follows free drainage in badly infected cases, prolonged vomiting and coughing after operations on debilitated patients.

Continued pain in rare cases may be an indication for a second operation. The pain may be referred to the scar or to the cavity. The pain may be more or less constant or it may come on after exercise. Painful scars may be caused by catching of certain nerves in the healing. In the cavity the pain may be due to adhesions.

Left ins usually cause a persistent sinus especially in infected cases. In clean cases healing may be apparently normal and pain or trouble with the bowels or bulging in the neighborhood of the wound will be the suspicious symptoms. With greater care and the use of long gauze instead of sponges in all abdominal cases these cases are very infrequent and will be a matter of historical interest only.

Operations for fistula, sinus, hernia, continued pain, and left ins differ from those previously mentioned as for these latter we can usually take plenty of time and the condition of the patient will allow a more deliberate and certain operation. The patient and the site of operation can be prepared so as to get the best chance of prompt healing. These operations do not give any more trouble than a primary operation and in most cases give the same results.

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THE HISTORY OF THE TREATMENT OF PNEUMONIA IN AMERICA DURING THE PAST FIFTY YEARS.

By Benj. K. Hays, M. D., Oxford, N. C.

By the term pneumonia as here used is meant pneumonia of the lobar or so-called "croupous" type. With the cause of the disease we are not now concerned. The various causative micro-organisms cannot be differentiated outside of a well ordered laboratory. The work of Cole and others in differentiating the types of pneumococci will doubtless lead to valuable results in treatment, but serum therapy is not yet for the general practitioner.

Nor are we concerned with the pathology other than as a recognition of the stage of the disease, the severity of the infection, the extent of lung involvement, the resistance of the patient and the presence of complications must necessarily influence treatment. It is of interest to remember, however, that it was about fifty years ago that the disease first began to be looked upon as a constitutional disease with local manifestations. Prior to that time pneumonia was regarded as a local disease with constitutional manifestations. This change in opinion brought about radical changes in treatment.

Mortality.

With the mortality of the disease we must concern ourselves, since the final test of any form or treatment must be its influence upon the death rate. It is the one great stain upon the attainments of modern medicine that the mortality of pneumonia stands today just where it stood one hundred years ago. During the Civil War the mortality among the white troops, both North and South, was about twenty-five per cent. Among the colored troops it was about thirty-three and one-third per cent. The mortality is usually given as, among children (without bronchial complications), four per cent.; among young adults, twenty per cent.; among persons over fifty years of age, fifty to sixty per cent. Austin Flint said (1868), that the disease was more severe in southern climates. Osler (1892), confirms this opinion and cites the figures of the Charity Hospital in New Orleans which gave a mortality of twenty-eight per cent. Osler gives the mortality of his own cases treated at the Hopkins which was 30.4 per cent. These high figures are certainly not in accord with my own observation of the disease. It is impossible to get exact data from men in general practice but the following figures are significant. The U. S. Census for 1890 gives 9 per cent. of all deaths, and for 1900 gives 10.5 per cent. of all deaths as due to pneumonia. The N. C. Report for 1914 gives 5.5 per cent. of deaths as due to pneumonia.

The mortality of pneumonia varies greatly in people of different ages, and different races, as well as in different epidemics, different years and, apparently, in different climates. One must take all of these factors into consideration before deciding upon the value of a given line of treatment.

Authorities.

Since this paper is made with the scissors I will give my authorities in the text rather than refer the reader to foot notes.

Pneumonia was differentiated from pleurisy by the French physician Laennec (the inventor of the stethoscope), in the year 1819. The treatment of the disease at that time and for the following forty years is of historic interest only.

The great forerunner of the modern school of medicine in America was George B. Wood, the first edition of whose work on the Practice of Medicine appeared in 1847 and the last edition in 1866. In 1866 appeared also the first edition of Austin Flint's Text-Book on Practice.

In 1885 appeared Pepper's System of Medicine in which the article on pneumonia was written by Alfred L. Loomis. In 1897 appeared the Loomis-Thompson System of Practical Medicine in which the article on pneumonia was written by R. H. Fitz of Harvard. In 1907 appeared Osler's Modern Medicine in which the article on pneumonia was written by Musser and Norris, both of the University of Pennsylvania. In Pepper's American Text-Book (1893), the article on pneumonia was written by Francis Delafield. In Forchheimer's Therapeusis of Internal Diseases (1914), edited by Frank Billings, the article on pneumonia was written by Henry L. Elsner of the University of Syracuse.

Other authorities will be referred to in the text. No one familiar with the great names in medicine will question that these writers represented the best thought of the periods in which they wrote.

Individual Treatment.

It is strongly urged by all modern writers that each case of pneumonia is a law unto itself and that no case should be treated by a routine method or in accordance with a preconceived theory that a given drug will cure the disease. It is believed that the disease is self-limited, running its course uninfluenced by drugs. It is the consensus of opinion that medication in pneumonia has killed far more people than it has saved.

Open Air Treatment.

Wood (1855), says the air of the sick room should be "purified by sufficient ventilation."

Loomis (1885), "The sick room should be large, cheerful and well ventilated and its temperature should range between 65 and 70 F.—there is no danger from catching cold from draughts—the belief to the contrary by the laity being the superstition of ignorance."

Fitz (1897), "Choose a sunny room, have the windows wide open, or the sashes taken out, regardless of weather or temperature. If there is dust or snow replace the window panes by cheese cloth screens." " 'Give him air, fresh air, in unlimited amounts and constantly.' "

Elsner (1914), "No pneumonic should be handicapped in his fight for air and light—if the patient is in the open air it does not matter how low the temperature, so long as his body is kept comfortably warm—every case of pneumonia should be treated in the open air." Quoting from Forchheimer he continues, "I do not hesitate to affirm that the fresh air treatment is the most valuable contribution that has been made to the treatment of pneumonia."

Osler (1912), "Whenever possible the patient should be in the open air."

Thompson (after fifty-five years experience in active practice), writes (1914), "One great indication is to supply the patient with all the fresh air possible—the chances of a pneumonic are better if his couch be put in a tent on the hospital roof than down in its wards."

Holt (1916), "There seems to be a decided advantage not only in fresh air but in cold air. Patients in cold rooms sleep better, cough less and altogether seem more comfortable than when carefully housed to prevent their 'taking cold.' Wide open windows are desirable even when the room temperature is as low as fifty."

Koplik says that infants and young children stand extreme cold badly.

Local Applications.

An ice bag to the head, hot applications to the feet, strapping the side for pain and the local application of iodine or sinapisms have many advocates while no voice is raised to object to such treatment.

Fitz (1897), and Delafield (1894), think cold baths and the wet pack of doubtful advantage. Elsner thinks it better not to reduce the fever believing the high temperature to be an advantag to the patient. Osler, Musser and Norris, and Tyson advise the use of the ice bag to the side for pain and the use of cold sponges, baths and packs to reduce the fever. The local applications of heat to the side to relieve pain finds many advocates and no objectors. I am unable to find that any writer has advocated the use of oils or grease in any form as a local application to the chest. On physiological grounds there is every reason to believe that shutting off the pores of the skin by oil or grease does great harm.

Blisters.

Willis (1621-1675, of "circle of Willis" fame), "I drew blood twice or thrice day after day—frequent blisters were administered, moreover, apozems, julips, also spirits of ammoniac and powder of shell fish were administered in turns." Large blisters were administered to the arms and thighs. The patient recovered but suffered from the blisters which did,—"run hugely and afterwards for almost a month daily discharged great plenty of a most sharp ichor." (Osler).

Wood (1855), "Should the disease have arisen from repelled eruptions or translated irritations of any kind efforts should be made to restore them to the surface or exterior parts by the warm bath, hot pediluvia and blisters and rubifacients."

The above quotations are given not only to show how we obtained our custom of using blisters but also to show what effect our medical fathers expected from them.

Loomis (1885), says that blisters are of questionable utility; Fitz (1897), condemns them. Musser and Norris (1907), and Tyson (1909), say that blisters sometimes do good in delayed resolution. No other writer consulted mentions the subject.

Venesection.

I need not remind the reader that bleeding was a universal practice not only in pneumonia but in almost every known ailment up to about fifty years ago. The practice seems first to have been seriously combatted in 1849.

Wood (1855), of course, bled freely (30 ounces), and repeatedly Loomis (1885), makes a strong argument against bleeding as a universal practice and employs it only under conditions mentioned below. Fitz (1897), leaves the impression that he is entirely opposed to the practice, claiming that he has seen it result in great harm.

Musser says that he has never resorted to it.

Elsner approaches the subject with great caution and gives the impression that while he often considers the utility of bleeding in a given case that he never actually employs it. Delafield says that venesection is "frequently adopted" but "not often employed."

Loomis, Strumpell, Osler, Tyson and Hare advise moderate blood-letting in the beginning of a case in sthenic individuals and also later when there are evidences of engorgement of the right auricle attended by cyanosis and dyspnea. In this last named condition they all believe that it often saves life.

Purgatives.

Drastic purgation was formerly a universal practice but has now been entirely abandoned. There is good authority for a thorough calomel and saline purge at the beginning of an attack.

Expectorants.

Expectorant mixtures are universally condemned in the early stages of the disease. A few writers advise their use in the later stages while other writers condemn them in all stages of uncomplicated pneumonia.

Opium.

In most treatises on pneumonia the pain and cough are considered together. For this condition opium is universally employed, Dover's powder seemingly being the most popular form in which to give it.

Alcohol.

Wood (1855), gave alcohol to drunkards only. Austin Flint (1868), advises its cautious use in asthenic cases. Loomis (1885), says that alcohol is our most efficient method of sustaining a failing heart. Strumpell questions the value of alcohol in pneumonia while Thompson does not mention it. Osler uses it to combat toxaemia, while Musser and Norris, Fitz, Preble, Delafield, Tyson and Hare advise the use of alcohol where there are indications of heart weakness, especially in the latter part of the disease.

Holt in his work on Children's Diseases does not mention alcohol and Koplik has ceased to use it.

Digitalis.

No where in all medical literature is such disparity of opinion to be found regarding the value of a given drug in a given disease as that of digitalis in pneumonia. This is well illustrated by the following quotation from Pel found in the work of Preble:

"National peculiarities appear to have some part in this discussion. The more warmly and ardently the blood flows through the veins the greater the enthusiasm with which digitalis in large doses is regarded. Under their clear blue sky the Italians regard it as a specific against the toxins circulating in the blood. In Roumania, with its oriental cast of mind, the home of this method, it is regarded with fatherly love. In France, where the blood is still more easily fired, it finds warm supporters. In Vienna, the number of enthusiasts decreases, but there are still a few. In North Germany one must hunt for its apostles with a lantern, and in cold phlegmatic Holland, the method finds no supporters, but meets with active opposition."

Wood (1855), says that digitalis "has been used with asserted benefit." Austin Flint (1868), does not mention it. Loomis and Fitz think that it does harm. Tyson and Elsner think that it does harm in large doses but is often of service in small doses. Musser and Norris say that "endocarditis occurring in pneumonia requires the use of digitalis." Preble thinks that in threatened heart failure digitalis is the best remedy at our disposal. Thompson does not mention digitalis. Osler, Delafield and Hare advise the use of digitalis where the heart is weak.

Strophanthus is often advised in connection with digitalis but no such claims have been made for its good effects and, apparently, no harm has been done by it.

Strychnine is almost universally employed for the failing heart but no claims for specific cure have been made for it.

Camphor in seven and one-half grain doses, dissolved in sterilized olive oil and given hypodermically, is warmly advocated by a number of writers, especially by Thompson, who says that it is better than strychnine as a heart stimulant, and who does not mention either alcohol or digitalis. Musser and Norris, Elsner and Osler endorse the use of camphor as a heart stimulant yet not one of the advocates of this drug mentions the fact that its hypodermic injection is very painful.

Other stimulants employed are caffeine, ammonia and adrenalin. Caffeine is used by Elsner as a routine treatment and is endorsed by Osler, Delafield and others though not mentioned by Musser and Norris. Strangely enough no one speaks of the danger of this drug keeping the patient awake.

The coal tar products are universally condemned while the consensus of opinion regarding oxygen is that it is useless. It has no advocate. Austin Flint (1868), employed quinine but later writers do not mention it.

Cardiac Depressants.

Aconite, antimony and veratrum veride were, next to the lancet and mercury, the sovereign remedies of the older writers. Laennec gave from one to two grains of tarter emetic every two hours and Wood (1855), endorses this treatment. Austin Flint (1868), and Loomis (1885), condemn this treatment while Fitz (1897), says that veratrum veride still has its advocates. Musser and Norris say that the use of these drugs must be "looked upon with many misgivings," while Osler and Thompson do not mention them. Elsner mentions only veratrum veride and says that he has never seen any advantage from its use and regards it as a dangerous drug. Tyson says that veratrum veride has its warm advocates but that he "has never felt comfortable while relying upon it."

Carbonate of Creosote.
(Creosotal)

This drug is enthusiastically advocated by Thompson (1914), who regards it as almost a specific. Elsner speaks favorably of it though without enthusiasm, while Hare (1914), says that careful clinical research has failed to justify the claims made for it.

Serum Therapy.

In this direction lies our greatest hope in the treatment of pneumonia. The whole subject is, as Koplik says, "still in a developmental stage." Outside of a hospital in which there is a well ordered laboratory serum therapy has no place in the treatment of pneumonia.

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WHAT YOU CAN OBTAIN FROM YOUR STATE LABORATORY.*

By Dr. C. A. Shore, Raleigh, N. C.

I thought it would be worth while to speak about the new work at the laboratory as well as to remind you of the old. These reminders are necessary, for we frequently find that the doctors are unaware of work which has been going on for years.

To make my talk as concise as possible I have had leaflets prepared which give an enumeration of the laboratory work:

Free Laboratory Help in Diagnosis in: Diphtheria, tuberculosis, typhoid fever, paratyphoid fever, syphilis—Wassermann test. Gonorrhoea—(a) Fixation test; (b) Examination of pus smears; rabies, intestinal parasites, meningitis (spinal fluid), malaria.

Free Water Analysis—Municipal and Domestic.

Free Vaccines: Typhoid vaccine, paratyphoid vaccine, triple vaccine (typhoid, paratyphoid A, and paratyphoid B), smallpox vaccine, pertussis vaccine.

At Cost of Package (25 cents): Diphtheria antitoxin, normal serum.

Treatment, Pasteur Antirabic—Free to the indigent, a fee of $20 to those able to pay.

Now in Preparation: Tetanus antitoxin, tuberculin.

The first division is the diagnostic work—bacteriological and serological. Such work is a necessity for the practitioner and unless he has a private laboratory it must be done either in a municipal or State laboratory. Since the value of such work is in direct relationship to the quickness in which the report is given, we have always used our utmost efforts to get out reports promptly, but distances in our State are great and delays in mail, particularly of late, often occur. For this reason we believe that every city of 20,000 inhabitants should have its own diagnostic laboratory which should be equipped also to do the milk work which can not be advantageously handled by a central laboratory. There still would remain plenty of work from the small towns and the country districts for the State laboratory.

It is necessary constantly to emphasize the importance of a correct interpretation of reports. For instance, there are many doctors and most laymen who believe that a negative report on a sputum examination means that the patient from whom the sputum came is free from tuberculosis. Of course it does not, although a positive report means that he certainly has the disease. On the other hand, the diphtheria bacilli may occasionally be found in a normal throat.

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*Paper read at State Medical Society meeting at Pinehurst, N. C., April, 1918.

If such allowances must be made for bacterial reports, how much more are they necessary for Widal reports and Wassermann tests! Misinterpretations are not usually the fault of the laboratory man. He realizes that the correct attitude to his work is to consider it an aid to clinical diagnosis.

The Wassermann test and Gonorrhoeal Fixation test are the newest work in this division.

We probably make more water analyses than any other State laboratory in the country. Much has been accomplished in the improvement of municipal supplies and commercial bottled waters, but we think that most of our analyses of domestic supplies are of comparatively little value. The local health officer can make a better estimate of a private well by an inspection than a laboratory man can by a laborious bacterial analysis. The point to bear in mind is that the underground water, with few exceptions, is pure and that pollution occurs from the top; therefore if you have an open well into which surface water may run, or if the bucket and rope must be handled by every user of the well, you may be certain that the well contains bacteria of intestinal origin.

The first vaccine made by us was typhoid vaccine in 1913. We believed that if typhoid fever could be stamped out of the U. S. Army it could also be done in North Carolina if the same methods could be used. Of course we realized that inoculation could not be made compulsory, but we could at least help. The cost of the vaccine at that time was $1.50, which alone was enough to limit its use. The demand for our vaccine was immediate and we estimate now that at least one-sixth of our population has been immunized, and the result is apparent, for there is certainly much less typhoid fever than there was five years ago. We do not think that the use of typhoid vaccine is alone responsible, but we are sure that it has helped. The vaccine that we made was identical with that used in the army, and we followed them last year in making a triple vaccine composed of typhoid, paratyphoid A, and paratyphoid B. So far as our evidence goes there is very little paratyphoid fever in North Carolina, and it is not a fatal disease, so we believe it best to immunize against it only in cases of known exposure or in epidemics.

We first made smallpox vaccine by following Noguchi's method of injections of virus into the testicles of rabbits. It made a beautiful vaccine, but unfortunately was easily killed by unfavorable conditions. As soon as we were convinced of this we discontinued its distribution and waited until we moved into our new laboratory where we could have the use of stables and make a vaccine in the classical way on calves. It is a particular pleasure to know that we have been putting out a very potent vaccine which has given general satisfaction.

Pertussis vaccine has been made during the past winter and distributed free. We realize that its true value has not yet been established, but the reports that have been returned to us have all been favorable. It is perhaps possible that unfavorable reports have been withheld.

The manufacture of diphtheria antitoxin is a much greater undertaking than the making of vaccines, but we have a good plant and now have diphtheria antitoxin of most excellent quality tubed in syringes and ready for distribution at 25 cents per syringe. Doctor Gordon tells me there were about 630 deaths from diphtheria in North Carolina last year, and I believe we can cut that down. The ideal way is free distribution, but our appropriation is not quite large enough for that, so it is necessary to charge for the cost of the syringe and package. The price of 25 cents is for each syringe, whether it contains 1,000, 3,000, 5,000 or 10,000 units. By next autumn I want to make arrangements with each County Health Officer to have at least one distributing station for diphtheria antitoxin in each county.

We have had an opportunity to put up normal horse serum at a nominal expense. We have hesitated to emphasize this product, as a mere mention of the uses to which it has been put sounds like a patent medicine advertisement. Will only say that it can be obtained from us for 25 cents per syringe, but that we are unable at present to make any recommendations, for or against.

The Pasteur antirabic treatment should not be necessary in any civilized State; nevertheless we have a great deal of rabies and it is on the increase. We would like to be able to send out the treatment and save ourselves from any laborious duty and the patients much expense, and perhaps some time we may evolve a satisfactory method. Meanwhile we should each of us remind our Legislators that there is one disease which they have the opportunity of abolishing by legislative enactment. An act providing for the confinement of all unmuzzled dogs would stamp out the disease in a very few years. We charge a fee of $20.00 for the treatment, but collect very little—averaging only $1.91 per patient when I last figured it up.

It would perhaps be better not to mention products not ready for distribution, for their preparation often takes longer than is expected. However, will say that we are now working on tetanus antitoxin and tuberculin, though can make no announcement about them at present.

If the laboratory can help you it is your duty to make use of its services. The maintenance of the health of the civil population was never more vital than now.

THE INSTITUTIONAL AND AFTER CARE OF DRUG ADDICTS.*

By W. C. Ashworth, Greensboro, N. C.

In general the public is either ignorant or prejudiced in regard to narcotic drug habituation, and aside from a small group of professional men, only those can appreciate the magnitude of the evil who have fallen its victim, or otherwise had an opportunity for close observation of same. It is signally unfortunate that the drug evil has not received the attention which it not only deserves but imperatively demands, and this at an age when scientists, legislators, philanthropists and social workers, professional and laymen are incessantly at work in the service of a number of causes, which, in the last analysis, are all aimed at one and the same object, namely: the conservation of human life. Notwithstanding the enactment of stringent laws and regulations, the addiction to habit forming drugs shows no decrease, hence it is the manifest duty of society to do its utmost to combat the evil. No measure of social welfare can be attained by charity alone, in fact humanitarian sympathy must take the place of charity if we are to succeed in combating the numerous evils that undermine the nation's vitality.

The crusade against tuberculosis was begun twenty years ago—the personal campaign of a small group of individuals; today it is a national cause, and, while there is much to be done yet, noteworthy results have been achieved in the fight against the great white plague, both by public and private initiative.

The ordinary addict does not use morphine for the supposed attending pleasure, but solely for the support to function, stimulation to circulation, maintenance of nerve balance and relief from impending collapse, therefore his need for morphine becomes as inevitable as that for food and air.

After the habit is well established, failure to administer the drug causes a chain of symptoms, which vary only in intensity in the different cases. These symptoms are, in a general way, as follows: vague uneasiness and restlessness, with a sense of depression, followed by yawning, sneezing, hypersecretion of mucus, nausea, vomiting and purging, twitching, jerking, and cramping of muscles, abdominal distress, cardiac and circulatory insufficiency and irregularity, drawn and haggard faces, pallor deepening to grayness, exhaustion, collapse, and, at times, death.

The general principles of treatment for those addicted to narcotics consists in (1) the isolation of the patient so that his access to the drug, save when administered by his physician, is absolutely prevented; (2) the employment of full rest methods with the application of all the procedures included, as absolute rest in bed, careful regulation of all of the functions, especially of digestion, full feeding, bathing, massage, and, perhaps, electricity.

The first step in the treatment of drug habits in general, and especially the morphine habit, is the withdrawal of the drug. Some writers advocate immediate withdrawal, others a rapid withdrawal, and still others, a very gradual one. I, personally, deprecate the making of any hard-and-fast rule as to the rapidity with which the morphine should be withdrawn, since different factors enter into each case and prohibit any routine therapeutics, although, of course, the patient should be weaned from his narcotic as rapidly as possible. The drug may be withdrawn abruptly if the patient is fairly robust, if the habit is not of long duration, and the daily dose has been less than five grains of morphine. But, if he is of the neurotic type, or if the drug has enfeebled his constitution, the withdrawal must be gradual, covering a period of from one to three weeks, according to the individual.

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*Read before the recent meeting of the North Carolina Medical Society at Pinehurst, N. C., April 18, 1918.

When the narcotic has been taken hypodermically, it is usually advisable to stop the use of the needle before undertaking the withdrawal of the morphine. The same amount that has been taken by hypodermic injection may be administered by the mouth for several days until the patient has become accustomed to the oral ingestion of the narcotic.

Even after the drug has been entirely withdrawn, I regard the handling of the case as "merely begun"; any form of treatment in which the patient is not controlled for from three to six months being practically useless.

A large number of drugs, usually nerve-sedatives, have been highly lauded as specifics in the treatment of morphine and other drug habits. It must be remembered, however, that these remedies are merely symptom remedies. There is no substance known to man which is capable of regenerating a diseased moral nature, and although it is possible that some of these systems of treatment may make the withdrawal period less painful, none of them can be regarded as curative in the proper sense of the word. Moreover, it is extremely doubtful whether any of them are more valuable than the well-known nerve-sedatives.

When referring to the quieting of the general nervousness, which is one of the predominant symptoms accompanying the withdrawal of opium or morphine, in my opinion more can usually be accomplished by moral support and the use of physical agencies than by drugs, and especially hydortherapy in the form of the Turkish bath, the hot or cold wet pack, and alternate hot and cold douches. These measures have also the indorsement of other writers in connection with massage and various forms of electricity.

The drugs that take first place as nerve-sedatives are the bromids and the solanaceous alkaloids. One physician begins with 100 grains of the bromids daily, rapidly increases the dose to 200 grains, continues at this for three or four days, and then stops its use. Another advises using the bromids only at night, using a combination of 20 grains of sodium bromid with 15 minims each of tincture of cannabis Indica and tincture of hyoscyamus.

Wood refers to the usefulness of hyosin in such cases, and to Dr. ambert's claim of remarkable results from the use of enormous doses of hyosin hydrobromid in treating drug habits, but thinks that, probably, his mode of treatment is of no greater value than any other symptom treatment.

Some writers have recommended dionin, a synthetic morphine derivative, as completely relieving the craving for morphine during the period of withdrawal. Alcohol and cocaine should never be used for this purpose, on account of their liability to form a new drug habit.

During the withdrawal period of treatment, when there are extreme intestinal disturbances, the diet should be almost completely restricted to broths and soups, and when meats are allowed, the white meats (fish, oysters, breast of fowl, etc.), will be found more beneficial and more easily digested than the red meats, such as beef, lamb, etc. I allow milk, vegetables, and fruit, with a small amount of meats to my patients.

Nausea is often relieved by the carbonated waters, while such stomachics as oleoresin of pepper or of giner are frequently helpful.

During convalescence, treatment should include the toning up of the general health and the nervous condition of the patient, and to this end, proper regulation of the diet, out-of-door exercises under guidance, and such tonics as tincture of nux vomica or hydrastis are recommended. The patient must be carefully watched to guard against his securing any form of opiate. Even after a so-called "cure" it would be well for him to take a long vacation, camping in the woods, before returning to his usual avocation, in order to avoid a relapse. In my opinion the treatment of morphinism should cover a period of from three to seven months, or even over a year, the patient still remaining under the supervision of a nurse after the first three months of "full rest" methods, since "In no class of patients is relapse so apt to occur as in morphine cases, and it is for this reason that every possible precaution should be taken, provided the patient's means permit it."

My usual practice in treating the morphine or opium habit is to withdraw the drug very gradually.

If the patient has been in the habit of receiving hypodermic injections, it is my plan not only to reduce the dose gradually in the manner indicated (so slowly that the diminution of the dose is practically imperceptible, later, more rapidly), but also to begin adding to injection small doses of strychnine sulphate, say 1-50 of a grain, and if the skin be very moist, small doses of atropine sulphate, say 1-200 of a grain. As the dose of the morphine is diminished, hyoscine or scopalamine should be added to the hypodermic injection, first in small and then in larger doses. As a rule, the atropine may be discontinued if the scopolamine be given.

In the after-management of such cases all fatigue and strain, excitement or worry must be avoided.

Of course every effort should be made in the treatment of all drug habits to discover and remove the underlying cause for the patient's addiction—whether it be of functional, organic, or psychic nature.

Suggestion, both with and without hypnotism, is also advised for the treatment of drug habits, and, while strongly advocated by some medical writers, is regarded as of little value by others. But it cannot be denied that treatment by psychotherapy of some form is needed for the strengthening of the will-power, the re-education of many drug and drink victims.

The first step towards renunciation should then be the restoration of self-respect, the demonstration that self-mastery is recoverable, and the inculcation of the conviction that with suitable therapeutic, hygienic, and dietetic measures methodically carried out, failure is out of the question. This moral support must, of course, be sedonced by the association of whatever therapeutic, hygienic, and dietetic measures may be necessary for the prevention or the relief of the underlying factors of somatic craving, and which in each case are obviously suggested by sympathetic indications.

T. D. Crothers, editor of The Journal of Inebriety, in a recent article on the "Psychic Treatment of Spirit and Drug Neurosis," says among other things:

"One central fact should be the controlling power, namely: to train and develop the mind and body out of the present condition and toward an ideal of new vigor and strength. The theory of the subliminal, or the inner consciousness, to obtain mastery over the degenerative functional impulses, is most suggestive and the application of which seems to be unlimited. It is clear that physical training and the removal of the toxic causes, and the improvement of nutrition, open a larger scope for the test of this theory, which is practically the influence of mind over matter. We are all aware of the potent power of this psychic force, seen in every great cult that is growing in this country. We are already aware that the great armies of spirit and drug neurotics in every section of the country should be halted, restored and saved from the jail and almshouse. With a wise application of psychic and physical remedies this can be done. The toxic neurotic with his damaged pain centers and faulty resisting powers, low vitality, needs something more than physical treatment. He needs psychic remedies to turn his feeble mentality into new plains of thought."

Dr. Ernest S. Bishop, who has had a vast experience with narcotic addicts, says in his recent (1916) article on morphinism:

"Morphinism fundamentally is a disease. It shows stages and variations just as do other diseases. It is complicated by or complicates other diseases exactly as do other morbid processes, and every case is absolutely individual. It is just as reasonable to treat all cases of pneumonia or typhoid or cardiac disease according to any one method as it is to so treat morphinism. From my experience, I conceive it is just as impossible to honestly promise short duration cure for all cases of morphinism as it would be to do so in any other disease. Rational treatment and prognosis must depend in it, as in other diseases, upon its stage and development; upon its complicating factors; and upon the condition of the patient—mental and physical—in the individual case."

"For its accomplishment I have no 'cure,' no routine method, no special 'treatment' to advance. I know of no drug or combination of drugs which can properly be called a 'specific'."

Further he writes:

"The mere taking away of morphine from a morphine addict is simply one step in the conduct of that man's case; and it is by no means the most important step. It can be accomplished in a number of ways, and its procedure is a matter of selection in the individual case to meet the indications of that case. Once it is started, it should be done as rapidly as possible and without undue suffering and strain. In the treatment of a case, of far more importance than any method of morphine withdrawal is the sufficient understanding of the disease mechanism and its symtomatology, and the ability to accurately estimate the patient's bodily need, and the maintaining of him in functional and metabolic addiction drug balance, and the securing of good tone and nutrition before withdrawal."

C. C. Meacham, writing in 1916 on

Morphinism, says that a drug-diseased person of six to ten years' standing should be kept under treatment and observation for at least a year, and better, for eighteen months.

CONSERVATION THROUGH CARE FOR DEFECTIVE SCHOOL CHILDREN (WITH SPECIAL REFERENCE TO FACTS LEARNED THROUGH EXAMINATION OF 2,000 MEN FOR DRAFT ARMY).*

By Z. M. Caveness. M. D., Raleigh, N. C.

We are now in the throes of the mightiest conflict of carnage and bloodshed the world has ever seen. The cry has gone up in every land to its people to conserve not only their man-power, but all of their material resources. If this mighty conflict is won for democracy it must be done by the economic conservation of our resources. When this mighty conflict shall have ended our economic life will undergo reconstruction. This will not only fall heavily upon this generation, but upon the rising generation as well. For this we need men and women who are strong physically, intellectually and morally. And, therefore I call to the people of North Carolina to give our school boys and girls every means and advantage that will tend to conserve their physical, intellectual and moral protection and growth.

First: This may be done by safeguarding our children against the invasion of the various contagious and infectious diseases that have swept our State, not only claiming many of our brightest children by death, but left hundreds and thousands maimed for life. This, we can best do, as citizens by observing the State quarantine law, which provides for the control and prevention of the contagious and infectious diseases. The effectiveness of this law does not depend upon the law itself, nor upon Dr. Crouch, as State Epidemiologist, but upon the ability of the county quarantine officers in enlisting, not only the doctors, the school teachers, but his entire constituent in the co-operation of promptly reporting any and all cases to the county quarantine officer that come under his or her observation or knowledge, and to see that such cases, when placarded obey the rule and regulations governing the same. When this is done we will have no more sweeping epidemics, cutting down the attendance of our schools, an thus causing the loss of thousands of dollars to the school fund in non-attendance, and last but not least, the lives of many of our children by death, and many more crippled and maimed for life.

Secondly: By providing for our children in the schools, as well as in the home, better means of sanitation by the construction, where running water is not accessable, some type of sanitary closet. I believe that the lack of this convenience in our rural districts and rural homes, is due largely to the fact that our people have not been shown the great importance, as well as the bodily convenience and comfort. When this is done it will be a means of controlling the various diseases, of which the human body is now recognized to be carriers. And, again we will have conserved our child life.

Third: By the medical inspection of our school children. Here lies, it seems to me, our greatest field for conserving the physical and intellectual growth and development of our children. They should, not only have every safeguard thrown around them as a means of protection against the inroads of any contagious or infectious disease, but should have removed or corrected any physical defect or abnomality that they may have acquired by heredity, or developed in their infancy or childhood up to the time they enter school because of the lack of proper care and attention. The physical defects which tend to retard the growth and development of the child and make of him or her a man or woman who is a dwarf, weakling or a cripple for life, greatly retards their intellectual development as well.

Governor Bickett has immortalized himself in the minds and hearts of the people of this great State, and will go down in history as the Governor, who upon the eve of his inauguration spoke out boldly in behalf of the interest of the physical well being of the school boys and girls of today, who in a short space of time will have developed into manhood and womanhood and assume the burdens of leadership in our civic life. And as a result of this inaugural address, came forth the enactment of the law which provides for the medical inspection of all the school children of North Carolina.

With this law as a basis upon which to work and to build, and Dr. Cooper, as a leader and director, unfolding in that masterly way of his, and at the same time firing with enthusiasm and zeal the medical inspectors who have undertaken this work this year, have set in motion a motion a mighty awakening and interest in the school boys and girls which has already swept our State from the coast to the western boundary. I am already convinced that it is only necessary to point out to the parents the physical defects and abnormalities that their children have either fallen heir to through heredity or acquired through improper care and attention in infancy and childhood; and show them the importance of having these corrected as far as possible in order that their children may not be retarded in their physical and intellectual growth and development. Many children in the past have repeated grades and been considered by the teachers and the parents as being indifferent and backward in their studies. In these upon examination we found some disability that was easily correctable that has produced this intellectual lethagy.

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*Paper read at the State Medical Society meeting at Pinehurst, N. C., April, 1918.

This work has awakened an interest in the children upon the part of the parents that never was, in many instances, even thought of. The child is the only priceless possession of its parents, and there is nothing that is within the bounds of reason that the parents will not provide if pointed out and shown the importance and the necessity of the same.

This is not only a work of mere physical examinations of the child's body, as well as his eyes, ears, nose and throat, but a mighty educational awakening. This, in its incipiency, is destined to grow in the near future to a point in interest on the part of the parent that it will not be necessary that this work be done by the medical inspectors of the schools, but before any child enters school its parents will see to it that that child has no physical defects nor abnormality correctable that would tend to retard its growth intellectually. Some may think that this is a fancy dream and a high ideal to attain; but when we as a people have caught the vision of the higher, nobler citizenship that would result from this. Then will we be ready and willing to do sacrifice that will develop a race that is strong physically and intellectually. No community, state or nation is mightier than its strong people. Our citizenship should be our first consideration, and this is being tried today as never before in the history of the world. The weak are being separated from the strong—the strong being sent forth to bear not only their burdens but those who have been found to be physically deficient.

It has been my privilege to examine in the draft for the national army since August 1, 1917, 2,000 men. Of this number 516 were disqualified because of physical disabilities that were directly traceable to preventable diseases or correctable physical defects or abnormalities in childhood. Without a single exception every man that was disqualified because of tuberculosis, organic heart disease, or had or complained of having had rheumatism—had either or both diseased tonsils or bad teeth.

This war has revealed to us in our economic life conditions that we never dreamed of. None have been revealed that have been more appalling and distressing than the weakness and frailty of our human race. The record of our various boards in the draft in the national army throughout our land and country show that 25 to 50 per cent. of their men were disqualified who were subject to draft between the ages of 21 and 31. This appalling condition should not exist. Every child born in this free land and country, has a right under the protection of his country, and God as well, to be given a fair chance for physical and intellectual growth and development, and may the day hasten when the citizenship is aroused to the point of interest that they will see to it that this chance be given.

Sexual Neurasthenia.

Sexual Neurasthenia is an impoverishment of nerve force and without doubt prostatic disease in a large measure produces it. In this condition we may find a prolonged phosphaturia and oxaluria, which does not as a rule respond to a change in dietary of mineral acids. Therefore in a neurosis, where there exists a continued phosphaturia or oxluria, and a condition of irritation in the genital tract, after eliminating the possibility of calculus, one must remember the prostate as being the factor to receive attention. To diagnose such a neurosis therapeutically administer sanmetto in teaspoonful doses four times a day for a few weeks and at the end of that time one may not only know the cause but also the remedy.

THE EXISTENCE OF TROPICAL SPRUE IN NORTH CAROLINA.*

By Edward J. Wood, S. B., M. D., Wilmington, N. C., Member of the Association of American Physicians, of the American Society of Tropical Medicine, of the State Board of Health of North Carolina; Fellow of the London Society of Tropical Medicine and Hygiene.

Tropical sprue will make one of the most interesting chapters in American medicine and North Carolina will play a prominent part in this history for the reason that it seems probable that the first reference to this disease was made in the Natural History of North Carolina by Dr. John Bricknell. I have made reference to this elsewhere and will only repeat here that it seems probable that Brickell's reference to white flux was really tropical sprue. Brickell was an Irish physician who was sent by the Crown as an emissary to the Cherokee Indians in the latter part of the seventeenth or early in the eighteenth century. Our profession would do well to look into the life and work of this Dr. Brickell for he deserves it if for no other reason than the few medical references in his natural history. In this work you will find the first account of the clinical manifestations of uncinariasis and a very good description of the lesions of yaws. If he had lived in one of our neighboring states there would probably have been erected about a century ago a monument to his memory on the capitol square. Recently his book was reprinted by the State and can be had for a nominal price in Raleigh.

In 1776 in Barbadoes Hillary described sprue but there was much contention regarding the identity of this condition and true eastern sprue which was thought could only exist in tropical eastern Asia. This is not the first time in medicine that we have been led astray by geographical claims of the limit of disease. We saw it in pellagra and we are seeing it every day in sprue. Sir Patrick Manson, the father of tropical medicine, was the first to assert that the eastern and western sprue were identical. There seems to have been much variation in the severity of the disease in different sections but apart from this there can be no doubt that the single entity covers the whole record under that name and, doubtless, many more not included because of the fact that in sprue there are many departures from the typical disease picture.

Sprue has been seen by me in North Carolina frequently during the past four years. It was recorded by William Allan of Charlotte and Houston B. Hiatt of High Point several years before in The Journal of the American Medical Association and their contribution formed one of the most important communications of the year. Personally I am deeply indebted to them. My contact with the disease was brought about by the fact that it is frequently confused with pellagra. When a diarrhoea is stubborn it is the custom to suspect pellagra and when added to it there is a sore tongue or mouth there can be no question, so many cases of what helped to cause the creation of the term "pellagra-sine-pellagra" came to me. I have followed many of those cases and in almost every instance the condition in time proved not to be pellagra. I now know that they were cases of sprue and that the disease is common in North Carolina though seldom recognized. In no condition can recognition mean so much for in the early stages the disease is very amenable to treatment. Since this first acquaintance I have had opportunity to observe sprue from the Philippines, sprue from Porto Rico, and sprue from Boston. Like pellagra the disease will soon be recognized in many sections thought it is much more strictly a tropical disease than pellagra.

There is no great complexity about the symptoms of sprue. The symptoms are chiefly diarrhoea, sore tongue and mouth, and anemia.

The diarrhoea is quite distinctive. The stools are very large, sofe in consistency, called by some writers "cow-pad," unattended by tenesmus or blood, seldom liquid, light in color, acid in reaction, usually frothy because of fermentation, and passed in the early hours of the day. It is remarkable to note that afternoon the movements usually cease until the early hours of the next day. One of my patients told us that during the night she passed enough feces to half fill one of the large bed room slop jars. The amount of gas attending the movements is unusually large and the odor is peculiarly offensive. The microscopic examination of the feces shows a tremendous amount of fat. This can be quickly determined in many ways. We have fallen into the use of a simple stain with Sudan III. Quantitative analysis shows that there is a tremendous loss of both fat and nitrogen.

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*Read before the Pinehurst meeting of the North Carolina Medical Society.

The Schmidt test diet was given for three days in making this determination. For the fat determination the Soxhlet method was used and the nitrogen was determined by the Kjeldahl apparatus. Fortunately these methods are not necessary for the diagnosis.

The tongue in sprue is variously affected. In many of the cases in this state the patient will hardly mention it unless questioned. It is not so red, not nearly so painful, and not so persistent a symptom as is the rule in pellagra. The writers say that the tongue may be denuded and that it may become deeply furrowed. My experience teaches that the best criterion is a tongue more flabby, less intensely red, not so pointed as is seen in pellagra. I have never seen salivation in sprue. On the lateral aspect of the tongue far back opposite the molars there often occurs ulcers known usually as Crombie's molar ulcers. These ulcers do not occur as a rule in pellagra.

In pellagra anemia (unless there is a complication) does not occur. In sprue there is invariably an anemia. You will question sometimes if your case is pernicious anemia or carcinoma of the stomach when your patient first enters your office. The blood picture does not suggest pernicious anemia morphologically but the color index is usually about 1.25. The hemoglobin often reaches as low as 20. I have been struck with the element of surprise which I always feel on making the blood examination in these cases for the degree of anemia is invariably much greater than I had expected. This anemia is very distinctive when it occurs with the mouth and intestinal symptoms. The question of confusion with pernicious anemia has furnished material for discussion but the final summing up of the matter is that the confusion is not warranted.

Many writers lay great stress on the diminution in the size of the liver and spleen in sprue. Sir Lauder Brunton does not regard it as a matter of any importance but rather considers it a condition resulting from malnutrition and which might occur equally as well in many other conditions. My own experience is that it plays too small a part to deserve mention. There are too many sources of error in determining such a state of the organs in the light of tremendous distension of the intestines with gas pushing upward with great force.

The nature of the disease is still under discussion. The functional tests suggest a pancreatic inactivity but the work of Pratt and others would indicate that the pancreas in some cases functions fairly well. At autopsy pancreatic changes have been marked but again Pratt calls attention to the danger of error in regarding a pancreas which is hard and resistant as a diseased organ for in many such cases the function is not impaired. To my mind this hardly answers the question and I cannot but feel that it will sooner or later be classified as a pancreatic disease. In many cases Mayo-Robson found the pancreas the seat of inflammatory change and in other cases pancreatic involvement formed an important complication.

Recently P. H. Bahr presented to the London Society of Tropical Medicine and Hygiene the results of his work in which he attributed sprue to a yeast probably **monilia albicans.** He seems to have met with only the most positive opposition to his views. But more recently Colonel Bailey K. Ashford, the father of our present knowledge of hookworm disease, working in Porto Rico came to practically the same conclusion. He has produced a curative vaccine from his monilia which is yet in the experimetnal state and he has also produced the disease experimentally. His conclusions have not yet been accepted generally but cannot be treated trivially because of the high position in experimental medicine occupied by the distinguished observer.

In a recent number of The Journal of Biological Chemistry Professor E. V. McCollum included sprue with diseases of faulty nutrition. What his basis for this is I do not know unless he groups sprue with pellagra as has been erroneously done so often.

One of the most notable things about sprue is its confusion with pellagra. In a recent number of The Journal of the American Medical Association there is an article by Major Gideon Wells of Chicago and others who made up the Red Cross Commission to Roumania. Among other references to pellagra Dr. Wells spoke of the large bovine stools containing undigested grains of corn which they frequently saw. As a matter of fact the stool in pellagra is never of this type and either they observed the stool of victims of sprue per se or else the stool of a sprue victim with that disease complicating pellagra. I have seen this a number of times and in one case I saw in Syracuse, N. Y.. a case of sprue from Porto Rico in which the complication with pellagra as a secondary factor was noted.

There can be no doubt that sprue and pellagra are entirely separate and distinct diseases. This view is not generally accepted for several years ago in an editorial in The London Journal of Tropical Medicine and Hygiene it was contended that the two conditions were really one disease and used as an argument a statement of mine in my book on pellagra. The very error of the writer in interpreting my views in such a way led me to a rather extensive study of the differentiation of the two conditions. In 1915 I presented to the Association of American Physicians my conclusions. The method of exact differentiation must be made in a study of the feces after a test diet. In pellagra I found that there was normal utilization of both fat and nitrogen. Pratt and Spooner in sprue found a fat loss of 45 per cent. and a nitrogen loss of 15 per cent. They also found by the Sahli glutoid capsule test and the thymus nucleus test that there was in addition to the intestinal inactivity a definite loss of pancreatic function. All of this work I duplicated in pellagra and found that there was always a normal utiliaztion of fat and nitrogen and I also found that in sprue there was this great loss just as had been found by the Boston observers.

Why pellagra and sprue so often occur together is still an unsolved problem hitherto unmentioned in the literature. The Roumanian report suggests a line of most important and interesting study.

The treatment of sprue is usually in my practice very discouraging. While it responds promptly to treatment of the right sort still the patient is hard to manage because it is not a drug cured disease. Patients will take drugs ad infinitum but when you only prescribe diet they change doctors at once. Drugs will not influence sprue at all unless it be that emetine will. This will be mentioned later. The diet is the essential thing and no case will recover unless the patient has enough confidence in the diagnosis and in the doctor to submit with a proper spirit of co-operation. Country people almost invariably will not drink milk so I have discarded any effort to carry out this plan of treatment which was the one chiefly advocated by Sir Patrick Manson. I think in the light of the study of the utilization of fat in the disease that it is just as well not to give milk but to rely on lean beef which should be free of fat and fibrous tissue. One pound of this round beef is chopped very fine, divided into four parts, cooked very lightly on a hot fire, and given every four hours. In addition to this the patient is given 3 pints of hot water during the 24 hours. If the patient is very sick the juice of the fresh beef is expressed and is given in tablespoonful amounts about every one or two hours. The patient must be kept absolutely in bed and should be dressed in flannel. After improvement begins I add small and increasing amounts of toasted bread crumbs. Sir Patrick Manson recommended strawberries and they might do in England where that fruit is very different than here but I have never had the temerity to try our local fruit in this connection. If fruit juice is needed I should prefer lime or orange juice.

In sprue there almost invariably occurs an absence of hydrochloric acid so I find it a good plan to give 15 minims of the dilute acid before and the same amount after each meal. Nux vomica may be combined with it to advantage and serves the double purpose of stimulating an appetite and satisfying the demand of the average patient for medicine. Some writers have advocated pancreatin in salol coated capsules. In one case I used this to advantage together with the other treatment just mentioned. In one case I have had good results from emetine but again I have seen it fail; the diet plan, however, never fails.

The most important thing about treatment must be early diagnosis.

In conclusion allow me to say that before this Society meets again it is probable that a large number of us will have entered the service of our army. Coming from the South we will be expected to know this disease as well as many other of the tropical conditions. If we know them as we should from our geographical position we will be able to render real patriotic service, we will be able to elevate the tone of Southern Medicine in the eyes of the profession generally, we will reflect credit on our State, and we will materially help ourselves.

Chronic Cardiac Disease.

The patient with organic heart disease needs constant attention to his digestion and nutrition. A little falling off in the general vitality and the compensatory status of the heart may be lost forever. At the first sign of nutritional decline, therefore, Gray's Glycerine Tonic Comp. should be given. This dependable tonic braces a wavering organism by reinforcing weakened functions.

PROTECTING PHYSICIANS IN THE ADMINISTRATION OF PUBLIC HEALTH LAWS.*

By A. McR. Crouch, State Epidemiologist,
Raleigh, N. C.

We have never had in this state until recently an adequate system of reports and quarantine for the control of communicable diseases. This has been due to an absence of sufficient interest on the part of the people and the medical profession in communicable disease control. Much of this indifference has been overcome and sufficient interest has been aroused to secure the enactment of state legislation. We now have ample quarantine laws, rules and regulations which when properly applied materially reduce the number of cases of communicable diseases.

The success of this law depends largely upon the support of the medical profession and until the indifference of a few of its members is further greatly reduced, maximum results, in communicable disease control cannot be obtained. Besides delaying the passage of proposed health laws and attempting to defeat the purpose of enacted quarantine regulations indifference has placed unfair burdens upon the shoulders of ethical physicians. While this indifference among physicians towards reporting of communicable diseases exists a strenuous effort must be made to protect the physicians who report their diseases against physicians who do not report.

Indifference is not the only reason why physicians fail to report. They sometimes fail purposely because they wish to gain favor with an ignorant family and destroy the tie that binds a patient to a more ethical doctor. Evidence of purposely failing to report is manifested in the following incident:

In a prosperous little town of this state scarlet fever occurred and several cases developed. All the physicians, except one treating cases, promptly reported them and the patients were quarantined and the exposed susceptible persons were isolated. The physician who failed to report treated his cases under the name of stomach rash until circumstances grew suspicious and an official investigation exposed him, then he admitted to the magistrate it was scarlet fever. If the investigation had not been made to determine the nature of the disease, this physician would have continued his underground work taking advantage of his more ethical fellow workers in order to gain favor with people who object to quarantine. Until the public mind has learned the value of reports and quarantine in controlling diseases and until public sentiment is sufficiently intelligent to recognize and resent the above form of unfair practice among a few unscrupulous physicians, statutory powers will be necessary to protect both the law abiding physicians and the public.

If all physicians would report every case of communicable diseases which come into their practices, people would soon learn that they have no choice of physicians to avoid quarantine. When such a time comes our best physicians will not be embarrassed for reporting their cases with threats of being replaced by another physician. Perhaps to relate an actual occurrence will give you a clearer idea of what I mean:

A prominent physician was called in to see a sick child and he diagnosed the disease a contagion. The family knew this doctor would report the case and that they would be quarantined; so the mother boldly said to the physician, "Doctor, some of my neighbors have not been quarantined and if you think the child has scarlet fever, I will call another doctor to take charge of the case." That was an open threat, a test of the medical ethics of an honest physician by an intelligent mother. The physician fearless as a lion replied, "Madam, if that is the price of your practice, call another physician." The mother saw the impression of her threat upon her physician and she realized that it was too late then to call another. The physician in charge did not lose this case, but it goes to show that some people are looking for the physician who does not report. If this mother had suspected scarlet fever and had anticipated quarantine, an unscrupulous physician would have been called to take the case.

The above examples of unfair practices in dealing with communicable diseases are only a few of those that actually occur. But the cases mentioned are enough to show that stringent measures for the protection of the great mass of physicians are necessary.

The law rigidly enforced puts physicians on the same basis in dealing with communicable diseases and prohibits an unscrupulous physician taking advantage of an ethical one even when an opportunity is offered.

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*Paper read at State Medical Society meeting at Pinehurst, N. C., April, 1918.

There can be no distinction made among those who fail to report their cases, be it purposeful or neglectful, it amounts to the same in the sight of the law and is unfair to the great mass of physicians who do report. It must be understood that the law will be enforced against physicians who fail to report not only to protect the community where communicable diseases exist but also to protect the physicians who do report.

The physician who reports his cases should be protected not only for his reporting but because he is giving impetus to a great movement. A movement for the protection and preservation of the health of both the present and future generations.

Eighty-five per cent. of the medical profession have endorsed and are supporting this great movement for communicable disease control. Among these 85 per cent. of physicians are captains of good fellowship who make medical societies, practice medical ethics, and live by the golden rule. Any man entrusted with the enforcement of a law which affords protection for such men can be stamped with no greater stigma than to stand motionless and see a few indifferent or unscrupulous physicians strike a stealthily blow at medical ethics.

A STUDY OF STREET DUST AND HOUSE FLIES.

By Jacques W. Redway, F. R. G. S., Meterological Laboratory, Mount Vernon, N. Y.

A close study of the origin and nature of street dust in the past few years has pretty clearly convinced me that dust and insects—at least in the city in which I live—are the chief menace to public health, and that wind-blown street dust carries with it many possibilities of disseminating disease. There may not be an apparent relation between flies and dust in general, but the relation between several species of common flies and one specific element of wind-blown dust is very close. This element is finely-ground horse dung.

Manure is the favorite breeding substance of the biting stable fly and the common house flies, of which two or three species constitute about ninety-eight per cent. of the whole number. Flies will breed in any rotting vegetable matter, but I think it can be shown that most of them breed in manure, at least so far as thickly peopled communities, where street traffic is heavy, are concerned.

Finely-ground horse dung is usually the most common, and often the greater part of the content of street dust. Because of the great amount of wheeled traffic it is ground to a degree of microscopic fiineness. On the whole, more of it is ground upon hard-paved streets than on dirt streets; moreover the much-used scraping pan serves—not to remove it, but to grind it finer and finer. Some of it is ground so fine that a one-sixth objective is necessary to determine its character. Because of its extreme lightness, the wind disseminates it more widely than any other element of ordinary street dust or, indeed, of the dust content of the lower air.

Not long go I took a small piece of vulcanite out of a box that was within another box. Neither box had been opened for several years. The vulcanite was covered with a gray film of dust, so fine that a one-sixth objective was required to resolve it with certainty; but the chief content of the dust was horse dung. Every piece of apparatus in my laboratory acquires a coating of it, notwithstanding that each instrument is inclosed in a glass case. Every article of food not in hermetically sealed containers is besprinkled with it, and the fruits and vegetables sold from the open stands on the sidewalks are loaded down with it.

The mobility of the horse dung content of street dust is such that it will penetrate almost any space. Air currents will carry it into crevices that neither water nor snow will reach; and if the velocity of the wind be doubled it will carry sixty-four times as much. Moreover the wind has a wonderful sorting power and it will separate the horse dung from the earthy matter, carrying the former into the most inaccessible places, where it is not likely to be disturbed by the street cleaner.

In the city where I live—and most likely in every other city where there is a considerable wheel traffic—the eddying winds of the streets sweep this part of the dust under fences and hedges; the broom of the sweeper packs it into the crevices of the gutters and of the curbstones where many layers accumlate during the summer season. Flies deposit their eggs in the accumulations, and the first shower furnishes the moisture and warmth necessary for incubation. In warm ,moist weather the eggs will hatch in from twelve to twenty-four hours.

From the egg to the insect stage the time may be as short as seven or eight days. At times these wind-blown accumulations contain many larvae. Flies breed in filth. Remove the filth and the flies will not breed.

In going from a dung pile to the table, flies carry not only the filth that adheres to their bodies, but also a goodly supply of germs in the regurgitated matter popularly known as "vomit spots." Much of this matter finally becomes a part of the floating dust of the air. All of it is alive with goodly quantities of germs. The recent announcement that house dust cultures communicated infantile paralysis should astonish no one. On the contrary the astonishment should arise if such a result did not occur; for, as germ-carriers flies and dust stand at the head of the list.

MEDICAL VS. SURGICAL TREATMENT OF CANCER.

By Frederick Dugdale, M. D., Boston, Mass.

Is surgery alone the only cure for cancer or is medical treatment alone the only treatment for cancer? The answer to this question involves many considerations and has prompted the writing of the present paper by the author who will attempt to show the relative position of one to the other.

From a medical and surgical standpoint the cancer problem today is without question one of the greatest the profession has to solve, in that this disease in all its various and insidious forms is one of the most dreaded which attacks the human race. The disease is rapidly increasing in all civilized countries and it is estimated that at the present time it accounts for one hundred thousand deaths annually, and yet, there are few among the profession who are willing to give this subject the special attention which it demands.

Although thoroughly versed in practically all other branches of medicine a large percentage of physicians and surgeons possess, unfortunately, a woeful lack of knowledge on the subject of cancer. When first seen, a large majority of patients suffering with this disease are incurable as a result of surgical operations alone. Failing, however, to distinguish between cause and effect, the physician or surgeon quickly advises operation whether indicated or not, and freely condemns without investigation other methods of treatment offered to patients by physicians who follow a different line of treatment, but based upon practical results.

While none of the various theories advanced as to the cause of cancer have been accepted as final, much progress in the successful treatment of the disease has been made.

Surgeons of wide experience frankly state that they cure but a small percentage of their cases by operation alone. The operation is not only productive of the most extreme suffering but causes the cancer cells and their toxic products to be carried through the blood and lymphatic streams to every part of the body, with a certainty of return.

Those surgeons who have made a special study of the cancer problem prefer, in many cases, to postpone operating until pre-operative treatment has been given, and later advise medical treatment to be administered following the operation which they realize is but palliative. As time goes on, this practice will be more carefully followed as being not only reasonble and rational, but should prove conclusively that the logical treatment for cancer in the majority of cases should be approached from the combined medical and surgical standpoint. If physicians and surgeons as a whole could be brought to look upon this problem from this standpoint, the final results would speak for themselves.

The fact that there are various forms of treatment of a non-surgical nature implies that surgery alone is not the logical treatment for this disease. Among the treatments which have been brought to the attention of the profession for use in conjunction with surgery are vaccines, serums, toxines, plant extracts, internal secretions, enzymes, ferments, radioactive substances, electrical currents, light, heat, colloidal drugs, caustics and escharotics; value being claimed for each in hands of their individual workers.

The treatment used by the writer is now being placed before the medical profession for use in all forms of cancer and malignant diseases as well as for tuberculosis, under the name of the "Dugdale Treatment." The composition of the treatment consists of a specially prepared creosote with a high Guaiacol content scientifically combined with hydrocarbon and essential oils presenting a mixture which possesses bactericidal and germicidal properties and through its use doses sufficiently large to effect tissue metamorphosis can be administered without stomach disturbances. No claims are being made for the treatment as a specific nor is it offered as a substitute for justifiable surgery.

Where growths of a malignant nature are localized, surgical operations are most successful. Within a short period of time, however, the condition, by extension, becomes constitutional, at which time the logical treatment in conjunction with surgery must be through the use of a treatment which can be administered so as to reach directly or indirectly the blood and lymphatic streams where it can come into direct contact and act upon the growth itself, its metastases and their toxic products.

The Dugdale Treatment meets all these requirements in that by acting through the blood and lymphatic streams it permeates every tissue of the body and is thus brought into intimate contact with the original growth, its metastases and the toxic products resulting therefrom.

The history of the use of creosote for therapeutic purposes was first advocated by Reichenbach in 1833 for the treatment of tuberculosis and was later revived by Bouchard and Gimbert in 1877, since which time it has been used in this and other diseases and approved by a long list of authorities all of whom agree as to its utility, though differing as to its mode of action, dosage and methods of administration. Sommerbrodt, as a result of a close investigation covering a period of nine years in which he treated over five thousand cases with creosote states that it will destroy tubercular bacilli in the blood. Following these same lines of endeavor, B. Robinson of New York has written a number of articles corroborating the work of the above writers as to the great value of creosote medication.

The tendency in the past twenty-five years has been to administer creosote and guaiacol by hypodermic injection, thus preventing stomach disturbances and giving a higher value to its therapeutic effect. Tuberculosis has been treated by this method by Lepin and Picot who used a mixture of iodoform and guaiacol dissolved in oils, while Leo used a more concentrated formula, though following the same methods. The most gratifying success followed this form of medication which was free from all reactions.

In 1892, Alexander called the attention of the profession to the use of Creosote in the treatment of cancer and the results obtained have been reviewed in various articles which have appeared in medical literature, the treatment having been used successfully in cases of inoperable cancer, in which the diagnosis had been verified by microscopic examination.

The writer began the use of creosote medication in the treatment of cancer in 1903, following for some time the formulas as advised by Lepin, Picot and Leo. Later various modifications of these formulas were made, resulting in the present treatment, the administration of which has brought about apparent clinical cures where surgery alone has failed. Especially has this been shown in cases where the location of the disease prevented the application of surgery.

The advantages to the physician who might have cases of cancer under his care are that the treatment is dispensed in hematically sealed ampoules ready for immediate use and no complicated technique is necessary for its use.

It is administered by injecting into the intracellular or intramuscular tissues or can be given internally. It can also be used as a local application in conjunction with the injections or internal treatment in those cases in which large open ulcerated areas are present such as involve the face, mouth, tongue, breast, cervix, or other parts of the body, thus reducing decomposition and preventing further absorption of poisons and toxines.

Its advantages over surgery, the X-Ray, radium and many other treatments lies in the fact that the location of the cancer does not prevent its use, while the promptness of its action and freedom from all unpleasant effects should immeasureably decrease every physician's therapeutic interest in what is too often considered a hopeless class of cases.

Used as a surgical adjunct for a reasonable period of time before operation takes place, it will assist in bringing about a more successful and lasting result by fortifying the patient's resisting powers and preparing the blood and lymphatic circulation to be better prepared to neutralize the additional toxemia which follows all operations on malignant growths.

In the post-operative treatment of cases in which the growth has been wholly or partially removed, its use assists in promoting the healing of the wound and also acts as a logical means of guarding against recurrences through reinplantation or dissemination of cancer cells to other parts of the body, to which recurrences unfortunately occur in a large percentage of cases in spite of the constantly advancing skill and technique in operative procedures.

The treatment is also indicated in all forms of apparently inoperable tumors in an attempt to so modify their character as to gradually bring them to assume the form of a circumscribed fibroma, making possible successful operative procedures later.

In all cases of malignancy, the condition of the heart, lungs, kidneys, bowels, blood secretory and excretory organs, vascular and nervous system, should be noted, and especially should the physician seek for the presence or association of metastases in other parts of the body.

Not infrequently, cancer is associated with and complicated by syphilis, tuberculosis or other diseases. In cases of this character, each of the individual complications present should be given due consideration.

In a series of cases in which this treatment has been used on patients suffering with various forms of "inoperable" malignant growths, and in which the patients' conditions were "hopeless" at time treatment began, the following results have been shown: viz.: The disease was apparently checked in its further progress and without exception marked beneficial effects were shown upon the original growth, its associated metastases, enlarged lymphatic glands, cachexia, and upon the mental and physical condition of the patient.

Pain, odor and hemorrhages were favorably acted upon and morphine was in some cases entirely withdrawn. Inoperable cases became operable and clinical cures have apparently taken place in patients who have since remained in good health without recurrences from periods varying from one to three years.

The treatment has been used successfully in tuberculosis and reports of a most satisfactory nature have been received by this office confirming these statements.

These pages owe their origin to the desire to stimulate interest in a subject of vital importance to every physician and surgeon. If the writer has succeeded in stimulating this interest and has been able to point out the value of creosote medication as applied in the Dugdale Treatment he will feel as though his efforts have not been in vain.

372 Boylston St., Boston, Mass.

Sanmetto and Cannabis Indica.

Cannabis Indica fulfills two important indications. First in order of efficiency it is a remedy for depression of the nervous system. Secondly, it relieves pain in the irritated urino-genital tract. For the first purpose it is valuable in more or less painful conditions, in which opium, on account of its tendency to restrain normal secretions, would be inadmissable. Cannabis exerts far less restraining power over the secretions than does most similar anodynes, it favors good appetite and digestion, and exhilarates the spirits. Hence its value in such disorders as are attended by gloom and foreboding. It is perhaps in genito-urinary disorders of an inflammatory type that its usefulness is most strongly displayed. With sanmetto it meets the wants of a pain reliever and nerve soother in urethritis, whether idiopathic or specific. Sanmetto and cannabis are, perhaps, more frequently indicated than other internal agents in acute gonorrhea. They are of great importance in surgical fever due to the passing of the catheter or bougie, or from operations upon the urethral tract. Think of sanmetto and cannabis indica in chronic cystitis, chronic irritation of the genito-urinary tract, burning micturition, and strangury. Note briefly the specific indications: marked nervous depression; irritation of the genito-urinary tract; burning frequent micturition; painful micturition, with tenesmus, and scalding urine. The dose of cannabis indica is ¼ to 1 grain according to the susceptibility of the patient; sanmetto one to two teaspoonfuls.

Hemagulen.

Hemagulen is a physiological hemostatic for local application. It is prepared from fresh brain substance.

Physicians find Hemagulen indicated in all types of hemorrhages from capillaries and small vessels where it can be applied to the bleeding surface, such as after the removal of adenoids, tonsils and other operations on the nose, throat, etc.

Hemagulen may be given orally, diluted with water, in gastric and duodenal hemorrhages.

Dentists use Hemagulen with fine results in checking the bleeding after the extraction of teeth.

Hemagulen is supplied in one-ounce bottles and is prepared by Eli Lilly & Company who will be glad to send literature on request.

Dr. Augustus Steel Rose, of Fayetteville.

Those of us who know him best can realize how feeble are mere words when one trie sto write of the life and character of our departed brother, known to us as Dr. Gus Rose, and ex-president of our society serving faithfully and well in any place of trust with which he had been honored. Dr. Rose was also a member of the North Carolina Medical Society, the American Medical Association, the Tri State Medical Association and a ruling elder in the First Presbyterian Church.

Inanimate bronze and cold stone can only show forth the outward form and features of the living, breathing man the sculptor would portray—so also is the pen barren in its efforts to truly represent the real man and true friend we have known and loved. Were we able to gather up all the fond words his loving friends have spoken of him; were we able to reproduce here the many kind thoughts of him that have coursed through the sorrowed minds of his devoted patients; the result would still lack the vital, throbbing spirit of the living man, who once moved among us, and fought with us the many battles against suffering disease and death. Like all true physicians, his life was the life of service to his fellow man, and service cannot be represented in cold words and prosaic type. It is of finer stuff that lives on and on, till time is no more—.

"Till the sun grows cold and the stars
are old,
And the leaves of the judgment book unfold."

It is with these thoughts uppermost in our minds that we attempt to render a proper memorial to our friend and companion.

At a meeting of the Cumberland County Medical Society held in the Chamber of Commerce on February 16th, 1918, the following action was taken in regard to the death of Dr. Augustus Steel Rose:

Whereas, We, the members of the Cumberland County Medical Society, desire to place on record our testimony of the love and appreciation in which Dr. Rose was held by us; and,

Whereas, We wish to testify to his standing and worth in our community; be it resolved:

First—That in his death we have lost one of our most zealous and devoted members, and our town and community one of its truest and most loyal citizens.

Second—That Dr. Rose exemplified in his daily life all those principles that represent the best of our profession, always looking to the best interest and welfare of his patients; never considering himself or his own comfort when he could do anything to relieve the sick and suffering. As a citizen he was always active and alert to everything looking to the advancement of his town and community, never shirking or evading any obligation or duty devolving upon him; indeed he could be relied upon at all times, always putting forth his best efforts in anything he would undertake, but we feel that what has been our loss has been his gain. His example as a true Christian gentleman, ethical in every way to the profession which he loved, will live in our memories and should stimulate us to higher and nobler things, making our profession the noblest of all to bless and care for suffering humanity.

Third—That a page in our minute book be inscribed to his memory; that a copy of these resolutions be sent to the family; and that they be published in The Fayetteville Observer and The Charlotte Medical Journal.

J. F. HIGHSMITH,
J. W. McNEILL,
J. VANCE McGOUGAN,
Committee.

The following communication has been forwarded to this Journal for publication from the Laboratory of Hygiene, Washington, D. C.:

In view of the reports in current medical literature of untoward results from the use of arsphenamine and neoarsphenamine, I have to request that you give publicity to the statement that it is requested that samples of any lots of these arsenicals which have shown undue toxicity be forwarded to the Hygienic Laboratory for examination.

In sending these samples it should be ascertained that the lot number is the same as that of the ampoules used on patients. The samples sent should if possible, be accompanied by a brief note stating the approximate body weight and age of the patient, the dose and dilution of the drug given, the symptoms and result; that is, whether fatal or not.

Respectfully,

S. W. McCOY,
Director.

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EDWARD C. REGISTER, M. D., EDITOR

CHARLOTTE, N. C.

SIXTY-FIFTH ANNUAL SESSION OF THE MEDICAL SOCIETY OF NORTH CAROLINA HELD IN PINEHURST, N. C., APRIL 16-19, 1918.

The sixty-fifth regular annual session of the Medical Society of the State of North Carolina was held in Pinehurst, N. C., April 16, 17 and 18, 1918, under the presidency of Dr. I. W. Faison, of Charlotte, N. C.

Notwithstanding the large number of Carolina doctors now serving in the army the registration was considerably in excess of three hundred, in addition to an unusual number of wives and daughters of physicians of the state. The attractions of beautiful Pinehurst, its numerous comfortable hostelries, its varied charms, unique and peculiar to the sandhill section, naturally attracted men medical, and coupled with these was a program which reflected credit alike on the untiring energy of the efficient Secretary, Dr. B. K. Hays, of Oxford, N. C., and the well ordered endeavors of the president to make his meeting memorable for its efficiency to the profession. That the session readily takes rank as one of the most successful, from every viewpoint, in the Society's history, all fortunate in being present will readily attest. From the beginning of the Health Officers' meeting on Monday to the day of adjournment there was not an idle hour, not a moment but the physicians were being entertained or improved in their stock of professional knowledge.

Monday morning the eighth annual session of the State Health Officers' Association convened with Dr. D. C. Absher, Lieut. M. R. C. U. S. Army, now stationed at Camp Greene, presiding, and Dr. George M. Cooper of the North Carolina State Board of Health Secretary, with a goodly attendance from the ranks of local and state health workers. A number of valuable papers were presented and discussed during the forenoon, and the afternoon meeting was held at the State Sanitarium for Tuberculosis at Sanitarium, eight miles distant, the entire membership having been carried there by automobiles, the courtesy of the local committee, headed by Dr. L. B. McBrayer of the State Sanitarium. President Absher's address was thoughtful and instructive. Dr. K. E. Miller, Capt. U. S. P. H. Service, temporarily health offiecr of Edgecombe County, made an admirable address on developing county health work. Dr. B. K. Hays presented the vital topic of interesting the public in health work. Defective school children, by Dr. George W. Shipp, Newton, N. C. Dr. Z. M. Caveness, of Raleigh, delivered a forceful paper developing some of the teachings gleaned from a study of 1,000 draft men in relation to defective children, while the final paper by Dr. C. A. Shore gave a graphic detail of the helpfulness of the State Laboratory of Hygiene to the general practitioner of North Carolina.

Resolutions relative to Dr. R. H. Lewis, unable to be present on account of illness, were adopted by the association.

The following were elected officers of the State Health Officers' Association:

President—Dr. J. R. McCracken, Waynesville.

Vice-President—Dr. D. F. Long, Lexington.

Secretary-Treasurer—Dr. George M. Cooper, Raleigh.

Certainly the eight years of the health workers' organization have been fruitful ones, and this most recent of the State Medical Society's progenies may after the continuous tutelage of the capable secretary, Dr. Cooper, well deserve to consider itself a well grown child worthy of its parentage and fostering. The plan of meeting the day previous to the State Society, and in fact as a very helpful adjunct, is an excellent one and deserves to be continued.

After eloquent addresses of welcome from Mr. Leonard Tuft, Dr. L. B. McBrayer and that prince of fine North Carolinians, Hon. Robt. N. Page, and the beautiful response to these addresses by Dr. F. R. Harris of Henderson.

Tuesday the State Medical Society listened to the President's address which was the subject of commendation from many friends, dealing as it did with matters of vital concern to both profession and people.

The various sections of the Society held their sessions with instructive papers and enlivening discussions.

Of especial interest among the many admirable papers and addresses presented was the illustrated pictures by Col. W. O. Owen, U. S. Army, entitled, "Fit to

Fight." It was a most graphic portrayal of the dangers of venereal infection and its presentation in every city and section of the land would tend most helpfully in the struggle for clean lives and healthier people.

Noteworthy addresses appropriately illustrated were also made by Dr. Wm. B. Sharpe, New York city, and Dr. J. W. Long, Greensboro, N. C., on Brain Surgery and well developed the great advances of recent years.

Pellagra was well considered by Surgeon Joseph Golberger, U. S. P. H. Service, and our own Dr. E. J. Wood, while Drs. J. Allison Hodges and James K. Hall, former North Carolinians, now of Richmond, Va., helpfully aided in the program with features of neurologic interest.

As was to have been expected with Carolina's true patriotic spirit flowing as it does now at high tide, the military features of the session were pronounced and never failing of attracting a full attendance and undivided hearing.

Col. Robert E. Noble, and Drs. Cyrus Thompson, Maj. J. W. Long, W. S. Rankin and A. W. Knox, were alike felicitous in their presentation of the necessities of the hour in relation to the medical profession and its special duties to the war and the people at home at the evening session of the second day. Colonel Noble is a strong, forceful man, and the excellent work performed by him since its inception in 1914 has been of incalculable benefit to the nation in inculcating a proper degree of patriotic impulses in the profession. North and South, East and West, he has traveled, in the past four years, ever with an eye devoted to the developing of the war spirit in the doctors, and with the facts and figures and a full knowledge of the necessities of the nation, and what the doctors can and should do in the premises, and the achievements of success in securing, without compulsory enactment by the nation, of all needed physicians for war service is due more to Colonel Noble than to any other half dozen men. No future honor the profession, or nation, may confer can be in excess of his deserving.

Major Long continues actively in promoting the organizing of North Carolina Unit, No. 65, for foreign service and the profession should see that he is fully supported, and the unit placed in the foreign field along side of that of Maj. A. G. Brenizer now in France facing the foe.

At the War Session Dr. L. B. McBrayer on behalf of the ladies constructing it, Mesdames L. B. McBrayer and P. P. McCain, presented the Society with a beautiful service flag with 345 stars, each representative of a member of the society now enlisted in the medical service of the U. S. Army and Navy. The flag was accepted and fitting response to Dr. McBrayer's eloquent address made by Maj. Joseph Howell Way, formerly of Waynesville, but for nearly a year past of the U. S. Army.

Dr. J. P. Monroe, Charlotte, N. C., an honored ex-president of the Society, and one of its strong leaders, presented the following resolutions which were unanimously adopted by the Society:

"Whereas, the world demand for a great American army becomes more and more insistent each day, and

"Whereas, an adequate medical service is an essential part of such an army, and

"Whereas, the indiscriminate withdrawal of a large number of physicians from civilian practice is causing and will cause many communities to suffer on account of inadequate medical service, and

"Whereas, it is evident that many conscientious and patriotic physicians labor under an embarrassing sense of responsibility to determine their post of duty amid conflicting claims of family, community and country, and

"Whereas, we heartily endorse the principle of the selective draft as the most just and effective method of military organization; therefore, be it

"Resolved, that for taking care at the same time of the medical needs of the army and of the people at home and of the personal interests of the individual physician, it is the deliberate judgment of this society that we should institute an optional selective draft and to this end be it further

"Resolved, that for the securing of justice to the individual physician and to the people at home and our soldiers at the front, the governor of the state of North Carolina is hereby requested

"(1) To appoint a commission of five, who shall pass upon the qualifications and obligations of members with reference to the needs of their families, their communities, and the army;

. "(2) To request each member to furnish him, on a form submitted by him, such information as may be necessary for the efficient and just action of the aforesaid commission;

"(3) To request each member who

shall furnish the aforesaid information, to bind himself, on a form submitted to him, to be governed in this emergency by the decision of the aforesaid commission; and

"(4) To request the councils of defense in every county in North Carolina to co-operate with the aforesaid commission in order that no inustice may be done to any individual practitioner and no unavoidable hardship be imposed by this draft upon any community, and be it further

"Resolved, that this society is moved to and takes this voluntary action because of its acute sense of its duty to perform in a time of national peril a service which no other class of our citizenship can render.

Remarkable and unusual was the action of the Society in voting as it did to hold the 1918 session again in beautiful Pinehurst, but such action was the spontaneous sentiment of the many present and found ready voice in the nomination by the committee and was fine compliment to this surpassingly beautiful Carolina pleasure place, and the magnificent hospitality of its genial proprietor, Mr. Leonard Tufts, and the able assistance rendered the hotel people by a local committee of marked capacity to entertain and please visiting guests.

The following new officers of the Society were elected for the ensuing term:

President—Dr. Cyrus Thompson, Jacksonville.

First Vice-President—Dr. J. W. Halford, Lillington.

Second Vice-President—Dr. T. W. Davis, Winston-Salem.

Third Vice-President—Dr. A. McN. Blair, Southern Pines.

Secretary-Treasurer—Dr. Benj. K. Hays, Oxford.

Councilor Third District—Dr. J. W. Tankersley, Wilmington.

Councilor Fourth District—Dr. C. F. Strosnider, Goldsboro.

Councilor Sixth District—Dr. Wm. DeB. McNider, Chapel Hill.

Delegates to A. M. A.—Dr. H. A. Royster, Raleigh; Dr. C. P. Ambler, Asheville.

Chairman Committee of Arrangements—Dr. L. B. McBrayer, Sanatorium.

THE ROLE OF FAITH IN CURING DISEASE.

Faith as here studied, is that mental quality which when added to the physiologic effects of medicine, lessens the usually required dose of that medicine.

By curing disease, is meant the shortening of the natural course of disease.

For illustration: Faith together with six grains of quinin taken three times a day, cures malaria. Quinin taken in ten grain doses three times a day, but without faith, cures malaria in the same length of time.

Upon the face of it the fact appears to be established that the role of faith in curing malaria has the value of four grains of quinin. So far, the role of faith in curing disease, seems to be fairly easy to map out. But the ease with which the solution of the problem is arrived at in this malaria case, is due to the fact that in th eargument, much has been taken for granted. For instance there are some medicines whose physiological actions are intensified by the simultaneous use of other medicines. Evidently this same biochemical fact is at work in the cure of malaria by faith and quinin. And to be obliged to consider the biochemistry involved, necessarily complicates the discussion.

Roughly speaking, faith is a mental harmone to the activity of quinin against the malarial organism. But that isn't all of it. Biochemistry is complexity itself. The seeming fact in the proposition is, that faith aids the specificity of quinin—that is to say the biochemic aim of faith and quinin is a fine more direct aim at the malarial organism, than is the aim of quinin alone. This aim may also be through faith's lowering of the resisting power of the organism to the action of quinin? Or again, faith may increase the powers of the antibodies circulating in the blood. Three very very hard biochemical questions. But this value of faith in curing disease, is worth the cost of looking into faith's physiologic action.

Always, the "Sphynx" riddle of psychophysiology is to connect up the mental with the physical. Still harder is it here to explain how faith can change the chemical composition of quinin, so that quinin becomes something other than quinin? If the possibility of such change is so great that the thought is ruled out, then of course, faith must act independently of quinin. In which case faith either attacks the organism directly, or through some medium as the internal secretions. As it is absolutely beyond belief that faith can focalize upon the rapidly moving organism itself, it would seem to be demonstrated that faith destroys the malarial organism by influencing to specific action, instinctive systemic life. To prepare the mind for entertaining the thought that faith does thus illuminate instinct, faith must be thought of as having been off guard, when the malarial organism broke through the lines. This seeming difficulty is explained away by recalling the fact that faith is much less made use of in the prevention of disease, than it is in bringing about recovery from disease.

Now, all the foregoing is based upon the proposition that faith added to quinin makes quinin more effective than is quinin alone. Manifestly, the proposition i san absurdity. Also, it is just as plain that the claims of reputed helpfulness of faith in the cure of other diseases, are based upon shady diagnoses, or else upon a lack of knowledge regarding the natural history of disease.

A NORTH CAROLINA PHYSICIAN HONORED AT THE BASE HOSPITAL, CAMP GREENE, U. S. ARMY, CHARLOTTE, N. C.

One of the most respected of the North Carolina physicians from the mountain section who early volunteered for the war with Germany is Capt. Samuel Harley Llye Franklin, Macon County, high in the mountains, and until a very few years since twenty miles from a railway station. Entering the service last summer as Lieutenant, Dr. Lyle was sent to Camp Greene, and when the Base Hospital was opened was placed in the receiving ward. Up to his recent retirement on account of physical disability, he passed upon, and admitted to the Base Hospital approximately eleven thousand patients, some seen in the office, some in the ambulances, others in day time or at night, at all hours, some by uncertain light in the coldness of the recent winter, but be it said to his everlasting credit as a diagnostician and clearheaded physician, that rarely indeed after his placing, were patients ever changed at their leisure by the experts of the hospital staff, after due observation and more careful study.

Shortly after his recent well earned promotion Captain Lyle was retired against his own protest, on account of ill health which had been recognized for months by his associates who often saw him in the receiving ward lying down awaiting the coming of the ambulance from the big camp. Urged during the winter to resign, he refused, affirming his wish to stay in the service until the end of the war, but military law was inexorable, and after being ordered before an examining board, Captain Lyle was honorably discharged.

On the day of his departure, at the luncheon hour, the Adjutant, Maj. Geo. A. Renn, of Norfolk, Va., formerly of Raleigh, N. C., introduced Major Joseph H. Way, well known to North Carolinians, who spoke with much feeling of the kindly regard and profound appreciation entertained by the entire hospital staff for Captain Lyle, and eulogized his wonderful record in diagnosis, concluding by handing him a beautifully engraved wrist watch, the gift of his fellow members of the Base Staff. Captain Lyle replied in similar vain, deeply touched, and fully sensible of the honor conferred, and thanking his friends for their gift, portrayed some of the benefits to follow this war, benefits affecting both people and physicians. Dr. Lyle has returned to his home in Western North Carolina and it is hoped the favorable clime will restore his health.

SELECTIVE DRAFT OF THE NORTH CAROLINA MEDICAL PROFESSION APPROVED BY THE STATE'S MEDICAL SOCIETY.

The resolutions printed in another column of this Journal, and presented at the recent session of the North Carolina State Medical Society by Dr. John P. Monroe, after conference with several of the strong and helpful leaders of the state's profession of medicine, will be read with more than passing interest, not only by Carolina doctors, but by all thinking men and women of medicine who are patriotically concerned for the credit of the state and the welfare of the nation in this our hour of national need. At the beginning of the war with the Central Powers the U. S. Army Medical Corps contained less than 500 medical men. Since then approximately to date, 19,000 physicians have been commissioned in the Medical Reserve Corps, of which number nearly 1,400 have already been retired for sufficient reasons leaving less than 18,000 members of the M. R. C. now in the service. Some four hundred additions have been made in the past year to the Medical Corps of the army, making a total today of scarcely more than 18,000 physicians in the army and navy of the United States.

That the war has but fairly begun so far as America is concerned, no thinking man will dispute, that every indication points to a needed army of Americans in France of fully 5,000,000 troops is of equal truth; hence medical men will with most sober mien contemplate their duty to the nation in its hour of peril. The Surgeon General has recently called for 5,000 additional enlistments in the M. R. C., and an additional 2,000 for the Naval Reserve, and the vital question is where are they to come from? That the profession will respond is true. That it has so far well met the duty of the hour is equally manifest. North Carolina has met the issue with her usual alacrity when the call to duty is sounded. A higher percentage of physicians have been admitted to the M. R. C. from North Carolina than from any other southern state except Florida, which with its sparseness of population and does not admit of proper comparison, and yet there must needs be ere peace hovers over our arms, more than double the number of the medical men of North Carolina enlisted than have already applied. Of the 100 counties of the state, 77 have furnished all of the doctors enlisted to date, while 23 have contributed not a doctor! Shall this state of things continue? Is it honorable to the profession that Waynesville, N. C., should have sent last year to the support of the nation four of its seven doctors, that Charlotte, N. C., with its splendidly patriotic men should have sent more than thirty-seven per cent. of its large list of doctors, while a few other cities and towns boastful of their progressive business spirit in the mart of trade and commercialism, have not felt as yet the impulse to arise and say to the nation, "Here am I, send me?" The resolutions adopted unanimously at Pinehurst by the State Medical Society were most carefully considered, thoughtfully and considerately phrased, and when read with patriotic spirit will compel the admiration as well as appeal convincingly to the spirit of fairness of every medical man. North Carolina has ever done her duty. No class of her citizens rank the medical profession in pure patriotism. We have done nobly, but there are sections of the state where gently the directing hand of an aroused public and professional sentiment, must and will, aid the doctors in seeing and doing their full duty. Placing in the hands of our capable Governor this constructive power to select and apportion the medical profession of the state to service for the common good, some staying at home, others applying for commissions in the M. R. C., was one of the finest pieces of work for humanity, one of the choicest efforts to preserve the noble ideals and the highest standards of honor in the profession of the state, that the Medical Society of North Carolina has ever performed since its organization in the year 1849. All honor to the able and far-seeing leaders (a later historian of the profession will record their names), who worked untiringly and unceasingly that the medical men of the state should score another "first" for North Carolina, in that it is the first state of the nation to tender its professional all to the public good during the day of trouble. Let every medical man promptly on receipt of the blanks which will be sent by Governor Bickett carefully fill the same and return it that the committee with the Governor may act with due and proper deliberation on the determining of what every doctor should do. And in future added respect and veneration as men who so loved the nation that all were volunteers to save its honor, will be the rich heritage of every North Carolina doctor, beside the setting of a worthy example now to other states.

WHAT IS NEURITIS?

This appears to be a moot question even in this day of our progress in medicine. Some declare that almost every pain and ache in the various areas of the body is a form of neuritis, while the neurologists go to the other extreme and state that it is a rare condition. The truth lies somewhere between the two points of difference, and the writer proposes to establish that point to the best of his ability.

Dana recognizes that neuritis exists, and classifies it as follows: he states that it is an inflammation of a nerve or nerves, of two types. The first is interstitial and perineuritis, and the second is the diffuse, with parenchymatous degeneration. In the first class he states "there is a hyperemia with at times an extravasation of blood. An exhudate occurs into the fibrous framework of the nerve, with migration of leucocytes." The inflammation varies from the low grade and moderate, to the severe and acute type, with considerable exhudate, which in time causes pressure and in many instances, destruction of the nerve fibres. In those cases in which there is no destruction of the axis cylinders, there is no doubt of recovery. In the more mild types where there is no deep inflammatory process, but is limited to the surrounding tissues, we may safely term peri-neuritis, and it is this form that is so common, and which has been the cause of so much controversy. It gives pretty much all of the classical symptoms, such as pain and restricted motion and the other phenomena so well known. According to Dana as before quoted, it is just as much a neuritis as is the more severe type, the difference being merely one of intensity.

Those who disagree with this state that neuritis is only existant when there is present degenerative changes in the nerve and muscular structures, which it supplies. Just what they call the preliminary condition which leads up to this disastrous state, they do not condescend to say, but allow the haze to cover it so completely that we poor creatures must figure it all out for ourselves. It would appear to the writer that it is all of a continuous condition from first to last, as all things must have a start and finish, and the degenerative conditions only show the terminal stage.

There can be no reasonable doubt that neuriti sis fairly common, if one will take the necessary means of making a diagnosis. It has a definite symptom-complex, the etiological factors are well-known, and its final outcome in case of neglect is equally recognized in the degenerative changes which are fairly inevitable, if the cause is not found and removed in time to prevent this unfortunate outcome.

As a means of diagnosis we have the static wave current, which probably is the most satisfactory and definite. The X-ray also offers a means toward that end. Our purpose is to deal only with the static current in its method of diagnosis. Before going into this phase of the subject, a few words are in order. We recognize that inflammatory conditions require rest o fthe part involved. If disturbed by motion or activity o fthe tissues, there is pain. This will apply to the application of passive motion as well as to that of the patient''s own activity. When we consider an inflamed nerve with its exhudate, it stands to reason that to avoid pain, the part must be kept at rest. This is nature's attempt when it splints that part with the exhudate. It is logical therefore to believe that when any activity of the tissues, nerve or muscles, is forced, there will be pain in proportion to the amount of that activity. Likewise it can be granted that the same amount of motion applied to healthy tissues will not produce pain. If these points are conceded, the proof can be well shown by the application of the static wave current over the site of the inflamed nerve. The cellular activity caused by the alternate contractions and release of the current jumping over the spark-gap, brings out an amount of painful responses in proportion to the size of the spark-gap and the amount of current used. If, on the other hand, there is no inflammation present, there will be no pain, but merely the vibratory effects caused by the alternations in the current. Its method of application is as follows: The patient is seated upon an insulated platform, and connected with the machine by a wire cord, attached to which is a flexible metal electrode, about two by four inches, or any approximate dimensions that the operator may select. This electrode is applied to the part involved, and held in place by pressure. It is preferable that the metal plate be wet, as this prevents the action of small sparks that are more or less annoying, and prevent the patient from giving a clear-cut statement as to the amount of pain. The wire is connected to the positive end of the machine, with the negative grounded. The machine is started with the pole pieces together, and the current is turned on by the separation of the pole pieces, allowing the current to jump across. The effect is vibratory, and this vibration sets all of the tissues in motion corresponding to the speed of the machine and the width of the spark-gap. If there is an inflomed nerve under the electrode, the pain will be shown almost instantaneously, and the patient will quickly tell the operator whether it hurts at all or too much. In mild cases, the gap may be opened two or more inches without excessive pain, but in acute cases, the pain is felt at the very first separation of the poles. This test is so definite and satisfactory, and has been used so continuously for years, that it seems strange that it should be such a dead letter to the majority of the profession.

The test for reaction of degeneration, as used by the neurologists for generations, and upon which they depend, is in reality a dead issue in this day of progress, and is not worth considering at this time, all of which may be the source of further contention, when this is read, but the writer has no apologies to make in this connection. It is to be hoped, however, that the method outlined will be more and more used by the profession, and then the end of the question of the existence of neuritis will be had.

DIPHTHERIA.

The question arises over and over again in the minds of physicians, when to push the Antitoxine (Diphtheria), in severe cases of Intra-laryngeal Diphtheria and what after results to expect. When a reference is made to large quantities being given during a short period of time it is not generally believed. Now that a diagnosis is once established by throat or nasal smear or both no time should be lost in administering serum as no harm can come from such serum, made by any well equipped laboratory.

About a decade ago serum sickness was rightfully discussed and needfully feared. The horse is more thoroughly examined at the present time and transmitted illness from horse to human is absolutely nil. Formerly the old broken-down nag, having served his time as a farm horse, about the cattle sheds and then used to haul manure and foul refuse was picked up as a good subect for a laboratory specimen. This meant innumerable dangers and resulted disastrously at times in Tetnus, glanders, etc.

To speak of the marvelous results of this serum (tried and true), may seem hackneyed but every physician realizes what a wonderful drug digitalis is and without the knowledge of its every use it is worthless. The serum is graduated in doses more accurate and more concentrated than before. Holding to the idea that doctors as a whole are familiar with cases requiring, say 3,000 units and a repeated dose or two with a breaking of the membrane in a day or two and a resultant cure we must go further and know what to do to prevent the patient wearing a tracheotomy tube for years to come or prevent death in case tracheotomy can not be resorted to soon enough.

Most state or municipal boards of health will furnish diphtheric antitoxine to the physician free of charge for worthy cases, thereby making no excuse for expense of serum to come in play. Realizing that the apparently simple diseases may clear up in the usual way of care and medication, the rare complications which emerge at times during every practitioner's rounds we all strive to be broadminded enough to meet the situation.

As time change smany things, so it is experience changes our ideas along scientific lines. Some o fthe best specialists, only a few years ago, were advocating the administration of as many as 200,000 to 300,000 units in a child not over 2½ years of age and in a nextremely toxic condition. The broken doses ranging from 10,000 to 20,000 units and repeating every six to eight hours. Undoubtedly the many subsequent doses after 40,000 units to 80,000 units were superfluous and unnecessary, however doing no harm for cures were reported in large numbers.

Lately the concensus of opinion in very septic cases has changed to the extent that large initial doses right off the reel are the most effective. For instance 20,000 units in your judgment may seem sufficient and you administer slowly, intravenously (serum at 99 deg. F. temperature), or subcutaneously as preferred and watch abatement of symptoms. Some men now claim that if this initial dose does not break up the membrane and cause a resultant curative effect, your judgment was wrong and that you should have given even a larger initial dose. In as much as no stipulated rule can be laid down in every case of alarming toxicity the repeated dose can be given according to the individual judgment 4,000 units or 200,000 units. Several rules have been set aside as practical and may be followed in a measure but it is impossible in every instance to judge the amount of toxic material to be counteracted in a system.

Though we realize that it is a matter of judgment and experience alone, we can easily be guided by the findings of others. The pros and cons of post-diphtheritic paralysis are often non-sensibly discussed. Post-diphtheritic paralysis is a symptom of the diphtheritic poisoning itself and not a symptom of indiscriminate usage of serum as occasionally argued. Paralysis, pharyngeal, resultant paraplegia or other forms as a result of the poisoning will clear up in practically every case.

CON-JOINT SESSION STATE MEDICAL SOCIETY AND N. C. STATE BOARD OF HEALTH, PINEHURST, N. C., APRIL 17, 1918.

According to time-honored custom and complying with the statutory enactment at noon on the second day of the meeting, was held the Con-Joint session of the Society with the State Board of Health, Major Joseph Howell Way, President of the Health Board presiding. The session was advisedly brief, being chiefly occupied with the annual report of the Secretary, Dr. W. S. Rankin, concisely mentioning the various activities of the Board. On motion the report was approved and ordered printed in the Transactions of the Society. Without burdensome detail, it was interesting to contrast the varied avenues of work being prosecuted by the North Carolina State Board of Health at this time with that of only a few years since. Educational work, public health, vital statistics, tuberculosis, etc., etc., with the eight bureaus, combined to make it one of the most active working boards of health in the nation. One feature of special concern to physicians was that portion dealing with the matter of reporting communicable disease, in which the majority of medical men are delinquent to the extent of failing to report eighty per cent. of such disease. Recalling that only recently have we had a really effective law requiring such report sit may be safely predicted that another year will show a far greater compliance with the statute. Prosecutions of several medical men have been had, and it is expected that others will follow, the secretary being determined to secure its enforcement. Dr. Rankin's fine report was as usual, the subject of pleasing commendation, the entire society well appreciating the fact that the N. C. State Board of Health ha sin its secretary one of the nation's foremost sanitarians, and efficient health officials.

CONFERENCE HEALTH OFFICERS SOUTHERN STATES.

A Conference of Southern States Health Officers was held at the Hotel Tutwiler, Birmingham, Ala., March 25-26, 1918, with more than seventy leading sanitary workers of the South in attendance. Two busy days were spent chiefly in consideration of the control of soil pollution diseases, and the varying phases of this vital subject were fully discussed as is evident from the varied completeness of the program, each section of which was carried out. The conference was presided over by the distinguished secretary of the North Carolina State Board of Health, Dr. W. S. Rankin, and the ten whole-time county health officers of his state were almost without exception, all present and participating in the work of the session. In all probability it was the most notably satisfactory gathering of Southern public health officials in the intense spirit of interest manifested in the discussions, and the thoughtful onlooker must have felt that with the class of strong purposeful men present devoting the best efforts of their lives to the improving of sanitary conditions of the South, it can but be a mere question of time when our own loved section of this great nation will truly be regarded by all men as the choice of all countries for human habitation. Never was the spirit of determined interest more seen in a body of sanitary workers than in the conference, and its splendid success in every way reflects credit on Dr. John A. Ferrell, the American Director of the International Health Commission, and the guiding hand in planning and arranging the meeting. A most delightful dinner was given on the evening of the first day, featured by three addresses, each notable in character, by Drs. Wickliffe Rose, W. H. Welch, and B. L. Taylor, the latter being the talented young sanitarian who achieved such signal success in the reduction of the malaria incidence at Crossett and Lake Village, Ark.

Strong resolutions, urging energetic mearures for the curing of the soldiers from the Southern States afflicted with hookworm, were passed, with instructions to present the same to the proper authorities.

The military arm of the nation was represented with ability by Lt. Col. Wm. H. Welch of the Medical State Health Board, Capt. Joseph H. Way, of the N. C. State Board, and Lieutenant Brown of the Virginia Board.

DR. CYRUS THOMPSON, PRESIDENT N. C. STATE MEDICAL SOCIETY.

The State Society at its recent session did itself honor as well as making a wise selection in conferring as it did by the unanimous vote of the nominating committee and constituent bodies, its choicest distinction on this well known general practitioner. A learned physician, an accomplished gentleman, a skilled debater, and gifted orator, widely known over the state as a patriotic citizen, his election again lends emphasis to the often quoted suggestion that rare indeed is any but a first class man and able physician elected to the titular head of the state's organized medical profession. Intelligence, foresight, thoughtful consideration, and a careful taking of counsel with other wise leaders, will characterize his administration of the state medical societies' affairs during the ensuing year. We congratulate Dr. Thompson on his preferment, and felicitate the society on a wise selection.

AN IMPERATIVE APPEAL FOR MEDICAL OFFICERS.

An urgent and imperative appeal has just been issued by the Surgeon General of the United States Army, for doctors for the Medical Reserve Corps.

There are today, 15,174 officers of the Medical Reserve Corps on active duty and the Medical Department has reached the limit of medical officers at the present time available for assignment. With these facts before the medical profession of this country, we believe that every doctor who is physically qualified for service between the age of 21 and 55 years, will come forward now and apply for a commission in the Medical Reserve Corps.

The Surgeon General says: "So far the United States has been involved only in the preparatory phase of this war. We are now about to enter upon the active or fighting phase, which will make enormous demands upon the resources of the country." The conservation of these resources, especially that of man-power, depends entirely upon an adequate medical service.

Drafts of men will continually follow drafts, each of which will require its proportionate number of medical officers and there are at this time on the available list of the Medical Reserve Corps, an insufficient number to meet the demands of these drafts.

The real necessity for the complete mobilization of the entire profession is imperative. It is not a question of a few hundred men volunteering for service, but of the mobilization of the profession for the conservation of the resources of this country. Let every doctor who reads this editorial and appeal from the Surgeon General, which appeal is based upon dire necessity, act promptly and present his application for a commission in the Medical Reserve Corps at the nearest Medical Examining Board. If you are not informed of the location of your Board, the editor of this Journal will advise you.

STAND BEHIND THE BOYS.

How many doctors have applied this now very expressive phrase to themselves? There is nothing that puts more heart and gives so much confidence to a soldier in the thick of a fight, than the thought that if he does suffer a casualty, he will receive proper medical care and attention. What are you doing in this respect?

There are many boys, sons of your patients or friends who have been or will be called into the service, and what a source of consolation it would be to the parents to know that possibly their own doctor might be the one to look after their boy and they will welcome your acceptance of a commission in the Medical Reserve Corps and compliment you for so doing.

The opportunity for you to do the most good in a professional way to the greatest number of people, is to offer your service to your country through the Medical Reserve Corps. Do not think longer about it, but apply at once to your nearest Medical Examining Board, and if you are not informed of its locality, the editor of this Journal will supply the necessary information.

STAND BY OUR BOYS, YOUR BOYS, THEIR BOYS. Remember the **gallant French in '76. The British who stood by Dewey in 1898. The Garibaldis who were always for LIBERTY.**

The rapid expansion of the army calls for largely expanded Medical Reserve Corps. The Surgeon General has issued a most earnest appeal for doctors. The Department has reached the limit of medical officers available for assignment.

DITORIAL NEWS ITEMS

Dr. R. M. Gallant, of Charlotte, N. C., has been ordered to Camp Gordon, Atlanta, to assume his medical duties as first lieutenant in the Medical Corps of the army. Dr. Gallant is a competent young physician and no doubt will be a successful officer in this service.

Dr. Wright Hall of Wilmington, N. C., died September 30, 1917. He was 68 years old and was an honorary member of the North Carolina Medical Society and an active member of the New Hanover Medical Society during almost his entire professional life.

Dr. Hall was a good man, conscientious in all his professional relations with his large number of appreciative patients. He did a great deal of charity work which seemed to be greatly appreciated. He stood well with the medical profession of Wilmington and that section of North Carolina. He was a Christian gentleman and had the confidence of the people with whom he associated. His life is a fine example to any young medical man.

Rex Hospital, Raleigh, N. C., was the recent recipient of a very handsome testimonial of appreciation from a former patient in a marble statue of Christ, the Divine Healer. It is a facsimile of the marble statue by a world-wide famous Italian artist which is admired by all who visit Johns Hopkins Hospital. Rex Hospital is felicitated on having so appreciative a patient, and the example is worthy of emulation and imitation.

Dr. Charles L. Summers Now With Maryland University.—The Faculty of the University of Maryland School of Medicine and College of Physicians and Surgeons, at its meeting last week, elected Dr. Charles L. Summers, of North Carolina, Professor of Clinical Pediatrics and Visiting Pediatrician to the University Hospital. Dr. Summers has entered upon his duties.

Dr. Summers is a pediatrician of wide training and experience, having for years devoted himself to children's diseases, and has studied extensively both in this country and in Europe.—Baltimore Sun.

Rank of Major for Capt. J. Howell Way.—The rank of major was conferred this week upon Capt. J. Howell Way, one of the state's best known medical men, who has been at the base hospital at Camp Greene since last August.

The news of Captain Way's promotion to the rank of major was received two days ago from Washington, whence all announcements of promotion in the army come.

Major Way is at the base hospital at Camp Greene where he has been assigned to important work, and has won the promotion recently accorded him through good service and strict application to duty. Major Way's home is in Waynesville, N. C.—Charlotte News.

Dr. Silvio Von Ruck, of Asheville, N. C., died April 7, 1918, in a New York hotel. He ranked as one of the foremost authorities on tubercular research work in this country, with a wide reputation abroad. He was forty-two years old and for the last fifteen years has been associated with his father in the conducting and management of the well known Winyah Sanitarium. He collaborated with his father in the publication of several works dealing with tubercular research.

Dr. Von Ruck graduated from the Bellevue Medical College, New York, 1899. He received his license to practice medicine in North Carolina the same year and joined the state society in 1902. In the death of Dr. Von Ruck, the medical profession of North Carolina has lost one of its brightest and most popular doctors.

Dr. Albert R. Houck, who for many years has been on the medical staff of the North Carolina State Hospital, at Morganton, N. C., has resigned and will resume his practice in Lenoir, his former home. Dr. Houck's resignation will be, as we interpret it, a loss to the hospital, as he has been there for several years and has had charge of the female department of the institution.

Dr. Houck is no longer a young man, having graduated from the College of Physicians and Surgeons, Baltimore, Md., in 1884. He was licensed to practice medicine in 1891 and joined the State Medical Society in 1893. Dr. Houck is a good man and we hope that he has retained enough of his former energy and physical strength to resume his practice in Lenoir. He is thoroughly competent and we predict for him success. We feel confident that he will be a valuable asset to Lenoir and that surrounding country.

Dr. Baxter Haynes, of Spartanburg, S. C., who was recently appointed County Sanitary Physician, has actively taken up his duties in Spartanburg County, Spartanburg, S. C.

Dr. Haynes is a bright professional gentleman and will do intelligent work in this new line of professional activity.

The following correspondence has been received from the Surgeon General's office:

Attention is directed to the enclosed memorandum issued by this office to medical officers of the army.

The large number of medical officers recently joining the medical department direct from civil life, and unfamiliar with the army regulations governing the publication of scientific papers, has resulted in a number of papers being published in various journals without authority from this office.

Editors of medical publications are requested to co-operate with this office in impressing upon medical officers the necessity for compliance with the enclosed memorandum.

It is requested that papers received from medical officers in the service which do not show that they have been referred to this office, and authority for publication granted by the Surgeon General, be forwarded direct to this office in order to obtain this authority.

In authorizing the publication of a paper this office does not necessarily signify its accordance with views or opinions expressed therein. It is, therefore, requested that editors refrain fro appending any note or legend expressing the formal authorization of this office.

By direction of the Surgeon General.

(Signed) C. L. FURBUSH,
Lieutenant Colonel,
Medical Corps, N. A.

Memorandum to Division Surgeons:

1. Attention of medical officers is directed to the provisions of paragraph 423, M. M. D., "Medical Officers will not publish professional papers requiring reference to official records or to experience gained in the discharge of their duties without the previous authority of the Surgeon General."

2. Numerous scientific papers written by officers of the medical department have recently appeared in the medical press without specific authority from this office. This practice will be discontinued, and the above regulation will be strictly complied with.

3. Officers desiring publication of professional papers will submit two copies to the Surgeon General with request for permission to publish same. Upon approval, a copy will be forwarded to the journal designated by the officer for publication.

By direction of the Surgeon General.

C. L. FURBUSH,
Lieutenant Colonel,
Medical Corps, N. A.

Medical Reserve Corps.

Letter from the Surgeon General of the U. S. Army:

To the Editor, Charlotte Medical
Journal, Charlotte, N. C.:

1. I wish to call to the attention of the professional at large the urgent need of additional medical officers. As the war progresses the need for additional officers becomes each day more and more apparent. Although the medical profession of the country has responded as has no other profession, future response must be greater and greater. The Department has almost reached the limit of medical officers available for assignment.

2. I am, therefore, appealing to you to bring to the attention of the profession at large the necessity for additional volunteers. So far the United States has been involved only in the preparatory phase of this war. We are now about to enter upon the active, or the fighting phase, a phase which will make enormous demands upon the resources of the country. The conservation of these resources, especially that of man-power depends entirely upon an adequate medical service. The morning papers publish a statement that by the end of the year a million and a half of men wil lbe in France. Fifteen thousand medical officers will be required for that army alone. There are today on active duty 15,174 officers of the Medical Reserve Corps.

3. Within the next two or three months the second draft will be made, to be followed by other drafts, each of which will require its proportionate list of the Reserve Corps, an insufficient number of officers to meet the demands of this draft.

4. I cannot emphasize too strongly the supreme demand for medical officers. Will you give the Department your assistance in obtaining these officers? It is not now a question of a few hundred medical men volunteering for service, but it is a question of the mobilization of the profession that in the large centers of population and at other convenient points as well as at all army camps and cantonments, boards of officers have been convened for the purpose of exaining candidates for commission in the Medical Reserve Corps of the army. An applicant for the Reserve should apply to the board nearest his home.

5. The requirements for commission in the Medical Reserve Corps are taht the applicant be a male citizen of the United States, a graduate of reputable school of medicine, authorized to confer the degree of M. D., between the ages of 22 and 55 years of age, and professionally, morally and physically qualified for service.

6. With deep appreciation of any service you may be able to render the Department, I am

J. C. GORGAS,
Sugeon General, U. S. Army.

BOOK NOTICES

Principles of Surgical Nursing, a Guide to Modern Surgical Technic, by Frederick C. Warnshuis, M. D., F. A. C. S., Visiting Surgeon, Butterworth Hospital, Grand Rapids, Michigan; Chief Surgeon Pere Marquette Railway, Secretary of the Michigan State Medical Society, Editor of The Journal Michigan State Medical Society, Member of the Michigan State Board of Registration in Medicine. With 255 Illustrations. Philadelphia and London: W. B. Saunders Company, 1918. Cloth $2.50 net.

This is a good book, and possibly the most important reason for making this statement is the beautiful illustrations in it which number 255. They thoroughly and very appropriately and intelligently illustrate the text. In reality the text deals with the description of the illustrations. The reviewer has no reason whatever to depreciate the text, but the illustrations certainly are numerous and very beautiful, and exhibit the environments that certainly ought to be familiar to every surgeon, and possibly the most up-to-date surgeon would gain many ideas in preparing for an operation and during an operation and the after management of a surgical case, by looking over this book.

A Treatise on Clinical Medicine, by William Hanna Thomson, M. D., LL. D., Physician to the Roosevelt Hospital; Consulting Physician to the New York State Manhattan Hospitals for the Insane, and to the New York Red Cross Hospital; formerly Professor of the Practice of Medicine and of Diseases of the Nervous System in the New York University Medical College; Ex-President of the New York Academy of Medicine, etc. Second Edition, Revised. Philadelphia and London: W. B. Saunders Company, 1918. Price $5.50 Net.

This is a good book and the reviewer has looked over it with much interest and approval. It is a treatise on Clinical Medicine and deals with the subjects which concern the physician who deals with the sick personally. The basis principles outlined in this book should appeal to every general practitioner. While it is alright to appreciate the laboratory and the findings of the autopsies, the first thing, and of the greatest importance is what will benefit or prolong the life, or cure the sick patient. It is this condition and this circumstance that this volume especially deals with. The book deals with certain prominent common symptoms that are very important when taking into consideration the prognosis and diagnosis and treatment of diseases. In each instance in this book the meaning is neither vague nor uncertain, but is presented in a perfectly plain, logical way, so that any reasonably intelligent physician can understand. Classifications of remedies are applicable and intelligent, but according to their special applications in various forms of diseases.

He deals with the various causes of diseases and the various causes of deaths and especially infections by living micro-organisms. There is also a section in the book that deals with peculiar organs and tissues. This is valuable and almost peculiar to this book. It is quite evident that throughout the book, the aim of Dr. Thomson has been to serve the physician while he is actively engaged in the performance of his professional duties.

In tihs revision Dr. Thomson calls attention to the application of the different rays of light in both the diagnosis and treatment of malignant diseases. He says that the rays of light, which is certainly true, are much more numerous than in those rays which are visible to the unaided eye, and hence he suggests or mentions the rays emitted by radium and the mysterious rays named from their discoverer, Rontgen.

Considering the book from all of the various standpoints, the fine mechanical work done by the publishers, and the many evidences of painstaking work by the author, any reviewer would certainly be inconsistent not to indorse or recommend the work.

Delusion and Dream. An Interpretation in the Light of Psychoanalysis of Gradiva, a Novel, by Wilhelm Jensen, Which is Here Translated, by Dr. Sigmund Freud, Author of "Wit and Its Relation to the Unconscious," "Leonardo da Vinci," etc. Translated by Helen M. Downey, M. D. Introduction by Dr. G. Stanley Hall, President of Clark University. New York, Moffat, Yard & Company, 1917. Price $2.00.

Dr. Freud has received the inspiration for this book in Gradiva, a novel by Wilhelm Jensen. He has found the dreams and delusions of the hero of Gradiva depicted in so realistic a manner that he has used this charming tale in demonstrating the application of the principles of psychoanalysis which he has evolved. The novel is translated here in full and is delightful reading in itself. Freud's brilliant commentary makes this volume one of the most fascinating books of the season. One need not be a follower of psychoanalysis to enjoy it. "The translator is thoroughly competent and has done her work with painstaking conscientiousness, and she has had the great advantage of having it revised ,especially with reference to the translation of technical terms from the German, by no less an eminent expert in psychotherapy than Dr. Smith Ely Jelliffe."

This book is certainly worth reading. It deals with a subject that all of us are in a way familiar with, yet all of us are ignorant as to the significance of the physiology that enters into dreams and delusions. From a medical standpoint, delusions and dreams of a semi-unconscious patient are very interesting. A delusion really is a dream, that a semi-unconscious patient cannot get rid of during his most natural condition, and frequently he does not free himself of the impression made upon him by the dream until he is well along in convalescence.

Fats and Fatty Degeneration, a Physico-Chemical Study of Emulsions and the Normal and Abnormal Distribution of Fat in Protoplasm, by Dr. Martin H. Fischer, Eichberg Professor of Physiology in the University of Cincinnati and Dr. Marian O. Hooker, Instructor in Physiology in the University of Cincinnati. First Edition. New York: John Wiley & Sons, Inc. London: Chapman & Hall, Limited, 1917. Price $2.00.

This book contains elective and somewhat amplified results of experiments which have not previously been published in English except abstracts in different medical publications. The earlier colloid-chemical studies compelled a consideration of some of the problems dealt with in this book. The study of the question of "fat in the cells" has been very recent. The authors have given a very careful and scientifical study to a subject of great interest in connection with the study of colloids. The subjects dealt with are rapidly becoming of greater interest in medical research work. Chapters are devoted to the Making of Emulsions, and the Breaking of Emulsions, on the Normal Fat Condition of Cells, Fatty Degeneration, Natural and Artificial Productions of Milk, the Mimicry of Some Anatomical Structures. Some of the experiments are shown with illustrations of apparatus and methods, and also of microscopic slides, showing the various conditions of fats in the tissues. This is a very valuable book and should be read with a great deal of interest by advanced students of physiology and medical science.

Dietotherapy, Chemistry and Physiology of Digestion Classification and Analysis of Foods, by William Edward Fitch, M. D., Major Med. Res. Corps, U. S. A., Formerly Lecturer on Surgery, Fordham University School of Medicine; Assistant Attending Gynecologist Presbyterian Hospital Dispensary; Attending Physician to the Vanderbilt Clinic, College Physicians and Surgeons, New York City, and Forty Contributors. Volume I. Published with the Permission of the Surgeon General of the Army. D. Appleton and Company, New York kand London, 1918. Price $7.00.

This work complete contains three volumes. The first volume is now before the reviewer. It is a large handsome book, containing 816 pages with numerous illustrations which are appropriate in every sense. The contributors of this volume are as follows: E. H. S. Bailey, Ph. B., Ph. D., Professor of Food Chemistry, and Director of Chemical Laboratories, University of Kansas, Lawrence, Kansas; Collaborating Chemist U. S. Department of Agriculture; A. L. Benedict, A. M., M. D., F. A. C. P., Captain Med. Res. Corps, U. S. A.; Consulting Gastro-Enterologist Buffalo Hospital, Buffalo, New York; William E. Fitch, M. D., Major Med. Res. Corps, U. S. A., New York City; John C. Hemmeter, M. D., Ph. D., ScD., LL. D., Professor of Physiology, Maryland University and College of Physicians and Surgeons, Baltimore, Md.; M. E. Jaffa, M. D., Professor of Nutrition, University of California, College of Agriculture, Agricultural Experiment Station, Berkeley, Cal.; Arthur I. Kendall, B. Sc., Ph. D., Dr. P. H., Professor of Bacteriology, Northwestern University Medical School, Chicago, Ill.; E. E. Smith, Ph. D., M. D., President Academy of Sciences, New York City, Formerly Professor of Physiology and Biological Chemistry, Fordham University Medical School, New York City; S. W. S. Toms, Ph. G., M. D., Capt. Med. Res. Corps, U. S. A.; Member Visiting Staff Nyack Hospital; Vice-President Medical Society of

New York, Nyack, New York; Arthur W. Weysse, A. M., Ph. D., M. D., Professor of Exper. Physiology, Boston University School of Medicine, Boston, Mass.

To anyone who is at all familiar with the leaders in the medical profession in this country can recognize in these names, men well and favorably known, not only in this country, but they have an international reputation. They are especially suited for contributing to a standard system like this.

While much has been written of late on the subject of nutrition and dietetics, it is widely scattered through various books, journals, pamphlets, and government and scientific reports, which are not readily accessible nor sufficiently comprehensive to furnish the physician with a foundation upon which to build a practical working knowledge of the scientific application of foods in either health, or diseased conditions. Besides, much of this matter is too ultrascientific to be of practical value to the busy physician. Moreover, in actual practice the physician is often confronted with many cases where a knowledge of the approximate caloric value of foodstuffs, as well as of the proper kind and dosage, will be of far greater value to him than any knowledge of the therapeutic action of drugs.

In order to understand the rationale of nutrition ,a working knowledge of the chemical changes which the foods undergo in the body is necessary. Therefore the body must be regarded as a human laboratory of nicely balanced chemical reactions. This knowledge of physiological chemistry is so essential that muc hspace is devoted to the subject in Volume I, embracing a concise presentation of the fundamental principles, including the most essential facts of physiological chemistry, with a brief but succinct description of the digestive organs, explaining the special functions of each in the process of digestion, and graphically describing the physiology of the absorption of foods. Without such a knowledge of the chemistry and physiology of digestion, many of the statements with regard to nutrition would convey but the most vague ideas to the reader.

The subject of dietotherapy has not received the attention in medical literature it deserves, neither has it been accorded the prominence in the curriculum of medical schools which its importance demands; therefore, the subject has been and still is sadly neglected by the medical profession. Indeed, it is one of the most deplorably neglected subjects in the whole domain of medicine. While it is true that the question is more widely appreciated than formerly, yet the average practitioner is unable to tell the exact fuel value of a glass of lemon jelly or the definite amount of the various elements of food substances contained in a pound of beef; he might not be able to recognize the necessity for maintaining a carbohydrate, fat and protein balance, nor how to do it; he might not clearly understand how the metabolism in certain diseases differs from that of a healthy individual, nor appreciate what pathological processes take place in the alimentary canal and other parts of the body, that may render digestion and assimilation of particular foodstuffs difficult or impossible. Functional pathology has supplied the information required in the latter while the actual, calorimetric study of metabolic processes in disease is illuminating the former.

This work is the outcome of nearly two decades of laboratory research and clinical investigation of the practical application of the principles of trophotherapy to the science of nutrition in both health and disease. The purpose of the work, from a purely therapeutic standpoint, is to awaken in the mind of the general practitioner the great importance for a bio-chemic study of nutrition, and to encourage in him a line of inquiry leading to a thorough understanding of the subject of trophology, tropho-dynamics and trophotherapy.

The author with his ossociates have given us a work with a purpose of overcoming these defects and supplying the needs of the practitioner of medicine, the dietician, the hospital, interned and medical student, as well as of furnishing a reference book for the domestic science and the nurses' training school. After a very careful examination of this volume, it is with a feeling of certainty that a most severe critic could not do otherwise than to commend it and thoroughly indorse it.

Miscellaneous.

"Supsalvs" (Registered), Stable Suppositories, Containing "606" (Professor Bagrov's Method.) Manufactured in the Corbiere Laboratories, Paris.

The result of numerous clinical experiments by Professors Bagrov, Geley, Morel, Mouriquand and Weil has proven that 606 can be administered per rectum by means of suppositories with excellent results. Absolutely comparable with those obtained by intra-venous injections.

At the International Congress of Medicine Ehrlich stated that the biochemical action of "606" on spirochaetes is not direct but indirect, a third factor found in the body fluids being necessary.

This success is explained by the well-known experiment of Levaditi: "If living treponemas be placed in a solution of Arsenobenzol (Ehrlich's 606) they continue to live in it. But if a trace of extract of liver be added to the mixture the treponemas are destroyed."

"If 606 has to be taken up and transformed by the liver in order to become toxic to the treponema, there is no better mode of absorption of the drug than by way of the intestine, since all the veins of the intestines join the portal vein. If this be the case no route could be more indirect and more unsatisfactory for active treatment than one that is not intestinal or not intravenous (i. e., prehepatic), since some of the drugs must necessarily become fixed everywhere before the passage through the liver has activated it." —Dr. Sabouraud, La Clinique (13-4-1913.)

As a result of numerous clinical experiments, Dr. Bagrov, of Moscow, has arrived at the same conclusion, and recommends the rectal method of administration of 606.

The rectal method of administration of 606 may be recommended to medical men who do not wish to employ intravenous injections. It yields excellent results, absolutely comparable with those obtained by the intravenous method, and is free from all risk.

In order to render the employment of suppositories containing 606 practicable, it was necessary to find some excipient that does not alter the active principle, even if kept for a long time, and that facilitates its absorption by the intestinal mucous membrane.

This requirement has been realized in "Supsalvs."

They consist of a nucleus containing the active principle, and surrounded by a greenish and slightly aromatic external envelope.

They contain no anaesthetic and do not react on the rectal mucous membrane.

In arriving at our prescription we have selected an excipient that shall be capable of assuring the chemical stability of the 606 in the presence of the intestinal contents. The active principle and the vehicle being bound to one another, the mucous membrane is able to absorb both simultaneously and progressively in the form of an organic emulsion.

Within twelve hours after the administration of a suppository the blood and the urine contain the drug, and it is easy to detect the arsenic by analysis.

Indications.

Specific affections in all stages. Tertiary lesions (General Paralysis, Sclerosis, Tabes).

Infantile Syphilitic Pemphygus.

Malarial as well as Cancerous Cachexia, Trypanosomiasis, and, speaking generally, all diseases due to Treponema.

Mode of Employment

One "Supsalvs" every three days, preferably after the bowel has been cleansed by an enema, until six suppositories have been administered. Then an interval of a fortnight.

The treatment is then repeated in the same manner until three series of six suppositories each have been employed. In acute cases one or two "Supsalvs" may be administered daily without any harm, treatment being continued for a week.

In boxes of 6 "Supsalvs" (Adult)—dose 0.10 grm.

In boxes of 6 "Supsalvs" (Infant)—dose 0.03 grm.

"Supsalvs" are supplied in a special metallic envelope which prevents deterioration. Obtainable from L. Pennington & Co., Post Office Box 60, Indianapolis, Indiana.

Dysmenorrhea and Menorrhagia.

Dysmenorrhea and Menorrhagia are symptoms appearing in many diseases or may be due to malpositions of the uterus and as a symptom demands treatment as one treats the symptoms of an irregular or weak heart, whatever may be the cause, with digitalis or with strychnine.

Virburnum Opulus and Dioscorea Villosa are drugs which have distinct antispasmodic and sedative action upon the uterin muscles and at the same time are acknowledged uterine tonics.

Hence when the symptoms of dysmenorrhea and menorrhagia, unless due to some mechanical cause, occur, the first thought should be Hayden's Virburnum Compound, which may be followed by such local or operative measures as the case demands. For the celebrated J. Marion Sims said, "For severe dysmenorrhea I have found Hayden's Virburnum Compound of great service." Dr. F. H. Davenport in his text-book, "Diseases of Women," referring to dysmenorrhea, says, "Hayden's Virburnum Compound has seemed to be the most effectual remedy of this class." Again, Prof. D. M. R. Culbreth, in his text-book, "Manual of Materia Medical and Pharmacology," refers to Hayden's Virburnum Compound in dysmenorrhea, menorrhagia, after pains and ovarian irritation.

Gonorrhea in Women.

The application of an aqueous solution of iodine in connection with the administration of sanmetto is recommended in the treatment of gonorrhea in women on account of its ability to penetrate the subepithelial structure sand deeper glands. It is also a stimulant, a counter-irritant, and an alternative. The aqueous solution (Liquor iodi compositus) is used because of the pain caused by alcoholic tincture. The gonococci disappear early from the secretions, intrapelvic extension is far less frequent, and there is little pain. The entire course of treatment is comparatively short and causes but little trouble to either patient or physician. In acute and sub-acute cases, where vaginitis or vulvitis is present, the patient should be directed to use one teaspoonful of the solution to two quarts of warm water as a douche twice daily. In the chronic and mildly inflammatory cases the strength should be gradually raised from one to two teaspoonfuls, or until the patient begins to experience a burning or smarting sensation indicating the limit of increase, the sanmetto to be administered in teaspoonful doses four times daily throughout the treatment.

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RECENT ADVANCES IN NEUROLOGICAL SURGERY AND ESPECIALLY IN THE DIAGNOSIS AND TREATMENT OF BRAIN INJURIES.*

By William Sharpe, M. D., Professor of Neurological Surgery, New York Polyclinic Hospital and Medical School, New York City.

The field of neurological surgery has so broadened during the past fifteen years as the result of the pioneer work of Horsley, Von Eiselberg and Krause, and in this country of Cushing, that a number of neurological conditions, which were formerly considered hopeless, are now amenable to improvement at least, and in some early cases even a cure may be expected. This advance has been due chiefly to earlier diagnosis, an improved surgical technique and surgical judgment, and to better team-work between the surgeon and the neurologist.

Earlier diagnosis of many intracranial conditions is now possible mainly as the result of the more general and intelligent use of the ophthalmoscope; it is now commonly recognized and appreciated that the condition of marked papilledema and "choked disks" is the end result of pre-existing pressure signs observable in the fundus of the eye. (1) No longer is it necessary to wait until a measurable papilledema occurs before it can be definitely stated that an increase of the intracranial pressure is present; besides the early fundal signs ascertainable by an ophthalmoscopic examination, the most accurate and definite test of an increase of the intracranial pressure is the lumbar puncture using the spinal mercurial manometer; in this manner the ophthalmoscopic findings can be confirmed. Intracranial localization has been greatly facilitated by the most thorough neurological examinations, and yet in many patients the localizing signs are so obscured by the increased intracranial pressure that they can be easily overlooked and they may even be absent; the importance of examining these patients early is obvious. No patient should be allowed to develop a secondary optic atrophy and its resulting blindness while an effort is being made to localize the condition—an unimportant consideration in many patients; an early cranial decompression will save the eye-sight and frequently the lesion can be localized later. X-rays are of much assistance in the diagnosis of many cranial and spinal lesions; by this means, long-continued intracranial pressure signs may also be determined and frequently the sight of the lesion indicated; a negative picture especially of the skull however, means nothing and frequently the interpretation of apparently positive plates is most difficult and at times confusing. Naturally in cranial and spinal injuries, the value of the X-rays is very great indeed especially regarding accurate diagnosis and yet the treatment of such conditions, particularly of brain injuries, depends upon the presence or not of an increased intracranial pressure, whether the skull itself is fractured or not; whereas in the spinal injuries, the chief concern is whether the spinal cord has been irreparably damaged or not—the spinal fracture being of little importance neurologically so far as the treatment is concerned unless the vertebral dislocation is so great that the spinal cord must have lost its continuity.

An improved surgical technique especially regarding the team-work operator and assistants has been a large factor in lowering the mortality of neurological operations; not only in the rapid loss of blood avoided, the duration of the operation lessened and thereby the shock minimized, but the risk of infection is also proportionately diminished to a point practically nil. Naturally, intracranial operations should not be hurriedly done, but they can be quickly and at the same time smoothly and safely performed; there is surely no advantage to be obtained in prolonging the operation either on account of faulty technique or as a result of such a complicated technique that the final closure of the wound is delayed many minutes. It is rarely necessary for the team to consist of more than the operator, two assistants and a nurse; the anaesthetist is a most important member and many disasters in cerebral surgery have been due to faulty anesthesia.

The third important factor in the progress of neurological surgery during the past decade has been due to a better under standing of the neurological condition at operation both by the surgeon and the neurologist at his side. Formerly, the surgeon knew little if any neurology, and the neurologist knew little if any surgery; the result was poor team-work and thus frequently the surgical judgment was not the best. Today the surgeon should have at least a practical knowledge of neurological principles—both anatomically and physiologically; naturally a training in neurological pathology is most essential. In this manner a number of mistakes in surgical judgment may be avoided; if the patient cannot be benefited, by no means make the condition worse by an operation.

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*Read before the North Carolina Medical Society meeting, Pinehurst, N. C., April, 1918.

One of the most important aids to an increased knowledge of neurological lesions, particularly of the brain and of the spinal cord, has been the observation of the living pathology at operation, and if death should occur, then the careful study of the tissue itself at autopsy. During the past three years, a permission for autopsy has been obtained before operation in each of my cases of neurological surgery (both ward and private patients)—no operation being performed unless the permission is given in writing—so that if a death should occur, then we shall ascertain the cause of death, and also the accuracy of the diagnosis and the treatment for the benefit of future patients. Naturally when an operation is advised, it is in the belief that the patient will not die, then it is absolutely essential for the benefit of other patients that we ascertain the cause of death in order that possible similar mistakes at least may be avoided. I know of no means so enlightening to the doctor regarding the accuracy of diagnosis, particularly of intracranial conditions, than the post-mortem examinations; besides the benefit of such knowledge to one's future patients, there is a marked tendency for these examinations to make the doctor humble as to his real knowledge and to keep him in that mental attitude.

If neurological surgery consisted chiefly in the removal of brain tumors it would be indeed a most discouraging field of endeavor. As you know, almost 80 per cent. of tumors of the brain are malignant and even though a surgically successful removal of the tumor is possible, yet the end results are the same—the pitiful condition of the patient is merely prolonged; the severe headaches, however, and the impairment of vision are thus temporarily relieved and even prevented by an early operative removal of the tumor. No patient should be allowed to become impaired visually from the increased intracranial pressure due to the growth of an intracranial tumor merely because the tumor cannot be located. These patients all should have an early decompression to relieve this increased intracranial pressure so that the vision will be spared, and then if the tumor does locate itself, a successful removal of the tumor may be possible and yet the patient is not blind; I wish to emphasize this point as it is most discouraging to operate upon these patients of brain tumor who have become blind.

Tumors of the spinal cord, on the contrary, are much more favorable in that there is less liability of their being malignant; they can be more accurately located and are much more accessible surgically. The operation of laminectomy has become much less formidable within the past few years so that an exploratory laminectomy of a suspected spinal cord tumor should always be advocated early in order to anticipate any permanent damage of a compression transverse myelitis. The frequency of benign dural tumors of the spinal cord is most hopeful.

The condition of brain abscess has been a most grave one. It usually results from an otitis media with its subsequent involvement of the mastoid; the usual sight is the contiguous temporo-sphenoidal lobe, and less frequently the adjacent cerebellar lobe. As lesions of the cerebellum can be much more accurately diagnosed than those of the temporo-sphenoidal lobe, therefore, if we can rule out a cerebellar abscess, then the site must be the temporo-sphenoidal-lobe—a comparatively silent area of the brain, especially the right lobe in right-handed patients. Formerly the otologists in cases of suspected abscess of the temporo-sphenoidal lobe would puncture the dura in search of the abscess through the "dirty" infected field of the mastoid; as all operations for brain abscess are really exploratory procedures, it is distinctly unsurgical to open the clean sub-dural spaces and to puncture the cerebral cortex itself through an infected area; if the abscess is not located (and this frequently happens), then the patient runs the big risk of a resulting meningitis and thus the usual occurrence —the exitus of the patient. Besides, the dura should not be punctured blindly with a knife or puncture needle unless the dura has been opened so that it can be clearly ascertained whether an underlying cortical vessel is present or not; many disasters from the resulting hemorrhage have frequently occurred from such procedures. It is much more rational surgically and a much better exposure is obtained to locate the abscess if the operative incision is made through the "clean" sub-temporal decompression—the vertical incision naturally being used; if the abscess is found, then it can be satisfactorily drained through the lower angle of the incision at the base of the skull; and if the abscess is not found then at least a decompression has been performed so that the intracranial pressure is relieved until the abscess may locate itself clinically, and the great danger of a meningitis and infective meningo-encephalitis has been avoided. In my series of brain abscess cases there are a number of them which I am sure I should have missed surgically if I had not used the better exposure of the sub-temporal route (2)

The condition of cerebral spastic paralysis occurring in children is a most interesting study. In 1843, Mr. Little of London in his first monograph (3) upon this subject stated that these cases were due to a lack of development of the cerebral tissues and also to an earlier meningitis; he did mention, however, that this condition apparently followed in some cases of difficult if prolonged labor with or without the use of instruments, and were undoubtedly, in his opinion, due to an intracranial hemorrhage; it is very interesting to note that in his second monograph (4) upon this subject nineteen years later, in 1862, he states that, in his opinion, three-fourths of these cases of cerebral spastic paralysis in children are due to hemorrhage. These observations have been confirmed recently by modern methods of diagnosis; it was formerly believed that hemorrhage in these cases caused a primary destruction of brain tissues—therefore no regeneration was possible and thus an operative procedure would be of no value in treating the condition. Within the last five years I have had the opportunity of examining and treating personally over 1,600 children having the condition of spastic paralysis. (5) By the more accurate methods of differentiating the ones due to hemorrhage from those hopeless cases due to a lack of development and to a former meningo-encephalitis for which nothing really can be done, it is now possible to diagnose the ones due to hemorrhage from these two conditions by means of careful ophthalmoscopic examinations of the fundi of the eyes and by a measurement of the pressure of the cerebrospinal fluid at lumbar puncture by means of a spinal mercurial manometer; if the ophthalmoscope reveals the signs of a definite increase of the intracranial pressure and those observations are conformed by the spinal mercurial manometer (the normal pressure of the cerebro-spinal fluid being 5 to 9 mm. of mercury), then we have an increased intracranial pressure and if this pressure is relieved permanently by a sub-temporal decompression and its modifications according to the condition of the underlying cortex as ascertained at operation, then a definite improvement results in these patients, physically and mentally. In this series of over 1,600 patients there was an increased intracranial pressure in about 20 per cent. of them, that is, in about one out of every five patients examined, and these are the ones and only the ones that can be benefitted by an operative procedure; I have now operated upon 339 of these children with a mortality of 34 patients (that is, 10 per cent.), and the results have been very encouraging; naturally, the younger the child, the better the prognosis—the first few days of life being the ideal time for the operation, although most of the children have been between four and six years of age; the oldest patient, however, was 23 years of age and a slight improvement resulted. Naturally, a sufficient period of time has not yet elapsed for us to ascertain the ultimate condition of these patients following operation, but their improvement has been so uniform and continuous in the younger children and the pathology of the condition being a hemorrhage upon the cerebral cortex and not in the cortex itself (in only 18 patients was the hemorrhage in the cortex or beneath the cortex), so that both the physical and mental impairments are merely the secondary results of the increased intracranial pressure due to this supracortical hemorrhage.

The condition of hydrocephalus has been a very interesting one in that it has now been ascertained the type of internal hydrocephalus is comparatively infrequent and that the type of external hydrocephalus is the usual condition in these patients. They both result from an earlier meningitis (if we exclude the cases of internal hydrocephalus due to tumor formation at the base), and the condition is therefore a diffuse one; if the ventricles are blocked by adhesions or exudate in the aqueduct of Sylvius or at the foramina of Majendie and Luschka, then an internal hydrocephalus occurs, but if no such blockage is present, yet we shall have produced an external hydrocephalus because the cerebrospinal fluid cannot escape from the cerebrospinal canal through the blocked stomata of exit in the cortical veins, sinuses and lymphatics. The methods in the past and occasionally now advocated of connecting the ventricles with the subdural spaces by means of tubes are therefore of little or no value in the treatment of this condition; even though the lumen of the tube should remain patent (and it rarely does), and even if the condition is one of internal hydrocephalus (which is much more rare than that of external hydrocephalus), yet such an operative procedure will merely be changing the condition of internal hydrocephalus to one of external hydrocephalus and therefore little or no improvement can be expected. The method recently used for draining the ventricles in cases of internal hydrocephalus and of draining the subarachnoid and subdural spaces in cases of external hydrocephalus by means of linen strands is a much more rational procedure surgically than any of the methods used in the past and its results have been very satisfactory; in the last report of 41 cases the mortality had been only thirteen patients. (6)

The condition of brachial plexus injury causing the so-called brachial birth palsy is the result of trauma to the plexus due to an over-stretching of its nerves by a forceful separation of the head from the shoulder at birth. Undoubtedly if the plexus has not been completely severed but merely over-stretched, then many patients recover from the temporary paralysis of the arm, but in those children where the over-stretching has been so severe and even to a point of a loss of continuity of the nerve fibres, then a permanent paralysis of more or less degree will result unless the scar tissue resulting from the hemorrhage in and about the plexus is removed and the ends of the torn nerves are anastomosed by an operation. If the arm is completely paralyzed at birth so that not even the upper arm or the fingers can be moved, then the ideal time for operation is at one month of age (no anesthesia being necessary); if, however, the fingers or the upper arm can be moved slightly at birth, then we should wait until three months of age, and if no marked improvement has occurred within this time, then the operation should be performed. In these children I usually have the mother bring the child to the hospital in the morning, operate upon it, and then have the child taken home in the afternoon. The operation is not a difficult one technically, and there has been no mortality in a series of 136 cases. (7) These patients should not be allowed to reach the age of six years and even older without an attempt being made to improve their condition by an operation; the best results have been obtained in children under one year of age.

In fractures of the spinal column I feel that unless we can prove absolutely that there is a complete severance of the spinal cord has been irreparably contused, that we should give the patient the benefit of an exploratory laminectomy within a short time after the accident in order to remove any bony compression, hemorrhage or edema of spinal cord, and thus increase the patient's chances of a greater ultimate recovery of function. So frequently in patients whom we consider to have suffered a complete severance of the spinal cord with complete loss of sensation and motion beneath the site of the injury that after three months, six months and even longer they begin to recover their sensation and also motion of the extremities (a wiggling of the toes), formerly completely impaired; these patients are the ones upon whom an early laminectomy should have been performed and thus the ultimate improvement would have been much greater than can be obtained at this late date. The operation of laminectomy is no longer the formidable operation of the past and its use should be much more frequently advocated than at present; these patients are most pitiful ones—the end result, unless something can be done for them, being but a miserable existence of a few years.

The diagnosis and treatment of brain injuries has advanced most rapidly within the last few years. The clinical symptoms and signs are so varied and frequently so confusing in these patients that it is a most fascinating field; apparently in many cases, the more extensive the fractures of the skull, the less seriously is the brain injured, and on the contrary, the most dangerous of brain injuries are frequently not even associated with a fracture of the skull. As is well known, the fracture in these cases (if we exclude depressed fractures of the vault which should always be elevated or removed), is possibly the most unimportant part to be considered in the treatment, whereas the presence of a marked increase of the intracranial pressure, with or without a fracture of the skull, should immediately cause the patient to be withdrawn from that large group of patients properly treated by the expectant palliative method, and the advisability of an early operative procedure to relieve the increased intracranial pressure should be considered.

During the five years 1913 to 1917, (8) I examined and treated personally 489 adult patients having acute brain injuries, with or without a fracture of the skull; in only 155 of these 489 patients (that is, 31 per cent.), were there marked signs of an increased intracranial pressure, and therefore only these patients were operated upon to relieve this increased pressure, whereas the remaining 334 patients did not show definite signs of an increased intracranial pressure and were therefore treated by the expectant palliative methods of absolute quiet, ice helmet and catharsis; if in shock, then the routine treatment of shock. It is thus seen that less than one-third of the patients having brain injuries, with or without a fracture of the skull, were operated upon, and approximately this same ratio has continued during the past year. It is this careful selection of patients, not only in regard to the advisability of an operation or not, and if indicated, then the type of cranial operation used, but of the greatest importance—the ideal time for performing the operation—these factors have made it possible to lower the mortality of fractures of the skull from the average of 50 per cent. of most hospitals to 28 per cent., and if we exclude the moribund patients dying within three hours after admission to the hospital from shock, internal injuries and in many cases the fracture of the skull being an incident in the patient's general condition, the mortality is lowered to only 19 per cent.

In the treatment of brain injuries, with or without a fracture of the skull, if the patient is allowed to develop definite paralysis, a lowered pulse-rate, Cheyne-Stokes respiration and pulse and that appalling group of extreme intracranial pressure signs, then I agree entirely with the opinion so commonly now held that these patients "get along" just as well without operation as with operation at this stage—the mortality being 50 per cent. and over; but the patients with brain injuries should not be allowed to reach this dangerous stage of medullary compression due to the high intracranial pressure—it should be anticipated by the accurate diagnostic methods now known and if a marked increase of intracranial pressure is ascertained, then an early relief of it should be advised, not only to save the life of the patient but to lessen the post-traumatic conditions of changed personality, either of the excitable or of the depressed type, persistent headaches, early fatigues, occasionally epilepsy and that long train of post-traumatic conditions in brain injuries, and due, in the majority of cases, to a prolonged increase of this intracranial pressure.

Besides the lowered pulse-rate and respiration which are comparatively crude signs of intracranial pressure and if, of the irregular Cheyne-Stokes type, then most late signs of extreme intracranial pressure with its resulting medullary compression, the two most valuable procedures for determining a definite increase of the intracranial pressure are the examination of the fundi of the eyes with the ophthalmoscope and the measurement of the pressure of the cerebrospinal fluid at lumbar puncture by means of the spinal mercurial manometer.

Although it is rare for a measurable papilledema and "choked disks" to occur in these cases of traumatic intracranial lesions, with or without a fracture of the skull, yet the earlier and therefore milder degrees of an edema of the optic disks should be most carefully "watched for" with the ophthalmoscope as being an accurate sign of the presence or not of a definite increase of the intracranial pressure ;the ophthalmoscope and especially the direct method, is a most valuable means in the diagnosis of intracranial lesions. Rarely do these fundal examinations reveal an increased intracranial pressure within six hours after the head injury; this is due to the presence of shock in these patients who later exhibit the marked signs of intracranial pressure; as head injuries are usually accompanied by shock of varying degrees, naturally in these cases the blood pressure is low so that even if a large intracranial vessel was torn, yet there could be only a comparatively small amount of hemorrhage because the resulting increased intracranial pressure would soon be greater than this lowered blood pressure of shock, and therefore the bleeding would cease; however, as the patient recovered from the condition of extreme shock, then the blood pressure would rise and now more bleeding could occur intracranially until the intracranial pressure would again equal the lowered blood pressure; finally, if the patient survived this condition of shock, then the blood pressure would be continuously greater than the intracranial pressure, so that this resulting increased intracranial pressure would produce its characteristic signs in the fundus of the eye—a dilatation of the retinal veins, and an edematous blurring of the nasal halves, and if still higher, then an edematous obscuration of the temporal halves of the optic disks; a measurable papilledema and "choked disks" occur in these cases only when the intracranial pressure is extreme due to a large intracranial hemorrhage of slow formation, such as the extradural middle meningeal type—just as in brain tumors when the ventricles are blocked producing an internal hydrocephalus; naturally, if this intracranial hemorrhage forms very rapidly and of large amount, the patient usually dies within a few hours so that the "choked disks" have very little time to be produced; again, the shock following head injuries usually lasts for about six hours in the patients who survive and therefore it is rare within these first six hours for the ophthalmoscope to reveal definite signs of an intracreased intracranial pressure; it may be also noticed that the patients who do not survive the condition of shock—they usually die within the first six hours. It is therefore of the greatest importance to recognize these early signs of increased intracranial pressure by repeated ophthalmoscopic examinations and to realize that these oedematous blurrings of the optic disks are more than being merely within physiological limits; it is true that in cases of myopia there is normally an obscuration of the disk outlines, but these patients can be excluded by the second and following test which should always be performed.

The most accurate means now known for ascertaining the presence or absence of an increased intracranial pressure is the measurement of the cerebro-spinal fluid at lumbar puncture by the spinal mercurial manometer. It is similar to a blood pressure apparatus, as safe as a lumbar puncture when properly performed, and by it the varying degrees of intracranial pressure can be carefully recorded. The normal pressure is 5-9 milimeters of mercury, so that if a pressure higher than 15 mm. is obtained at lumbar puncture, then we know that the signs of intracranial pressure, as shown in the fundus of the eye, are confirmed. This method of estimating intracranial pressure is most important in the differentiation of the intracranial condition of spastic paralysis due to an intracranial hemorrhage at birth from these other causes of the so-called Little's disease. In other intracranial conditions producing the extreme stages of papilledema and "choked disks," and even their end results of secondary optic atrophy, as in neglected cases of brain tumor, naturally it is not necessary to confirm the ophthalmoscopic findings in order to make a diagnosis of an increased intracranial pressure. If, however, in these traumatic lesions of the brain, we must wait until a "choked disk" results from extreme intracranial pressure in order for us to state that the intracranial pressure is high, and if we must wait for the pulse-rate to descend to 60 and below and the respiration and pulse to assume the irregular Cheyne-Stokes character of medullary compression, then undoubtedly the mortality of these patients will be 50 per cent, and even higher. Patients should not be allowed to reach this dangerous stage of medullary compression—this stage should be anticipated—and it can be by repeated ophthalmoscopic examinations and the measurement of the pressure of the cerebrospinal fluid at lumbar puncture.

In selected cases of mild intracranial pressure due to trauma, very frequently the convalescence can be shortened, the headaches relieved and the general condition of the patient greatly improved by lumbar puncture and, if necessary, repeated lumbar punctures; not only will the oedematous "wet" condition of the brain be drained in this way, but a prolongation of the increased pressure be avoided and therefore the definite danger of post traumatic conditions, so common in these cases, be lessened. Naturally, this method is only applicable to mild selected cases and lumbar puncture should never be advocated as a means of drainage in patients having high intracranial pressure or in subtentorial lesions for fear of a consequent medullary compression in the foramen magnum.

We now come to the most important and the difficult question in the treatment of brain injuries with or without a fracture of the skull: "If an operation is advisable, when should it be performed?" This question can more easily be answered by stating the two periods when the operation should **not** be performed. Naturally, we must exclude the majority (about two-thirds), of the patients having fractures of the skull who do not have a definite increase of the intracranial pressure and therefore no operation is indicated. (The depressed fractures of the vault naturally should always be elevated or removed).

The two periods in which an operation is distinctly contra-indicated in cases of brain injury, are, first, the condition of severe shock in the very beginning, and secondly, the condition of medullary collapse—the death knell of the patient. To advise a cranial operation upon a patient —no matter how badly the skull is fractured, nor how extensive the intracranial hemorrhage seems, and that patient is in the condition of severe shock with a pulse-rate of 120 and higher, then the operation at that period of shock takes away whatever chance the patient may have of surviving the shock; the operation is but an added shock and merely hastens the exitus. No patient having a brain injury should be operated upon in this condition of shock; the mortality is most high and if a patient does recover from an operation in this period of extreme shock, then he recovers in spite of the operation. Cranial operations for brain injuries in this stage of shock were frequently performed in the past and most disastrously, and thus cranial operations were almost discredited in the treatment of brain injuries. The natural reaction following these early operations in the period of severe shock was to wait until there could be no possible doubt that the patient was going to die, unless, as was thought, a cranial operation was performed; that is, the patient was permitted to reach the period of extreme medullary compression—a pulse rate of 50 and below, irregular Cheyne-Stokes respiration and pulse and profound unconsciousness, before a cranial operation might be considered. This is a most dangerous stage for these patients to reach, and it is doubtful whether recovery can occur even with an operation at this period—the mortality being very high. But if the patient has struggled through this period of medullary compression, and finally reaches the stage of medullary edema, when the pulse-rate begins to ascend quickly to 120, 130, 140 and even higher, respirations become rapid and shallow—that is, the stage of medullary collapse, then we have the second period when no patient should be operated upon—they all die—operation or no operation. I feel that if these two extremes can be avoided and the latter of these, medullary collapse, can certainly be anticipated in the operative treatment of brain injuries and their signs cannot be overlooked, that the rational treatment from an operative standpoint depends upon the presence or not of a definite increase of the intracranial pressure whether there is a fracture of the skull or not; in some of the most serious cases no fracture was present—either to be ascetrained at operation in the operated cases, or at autopsy. The aid of the X-ray is important in the treatment of these traumatic cases only in patients with doubtful depressed fractures of the vault and in latent fractures of the skull, where the bump is so apparently trivial that the patient might not be so carefully examined and treated as the condition would warrant. On the contrary, no patient with high intracranial pressure should be obliged to wait "over night" or for a period of hours merely to secure an X-Ray picture of the skull; it is of no importance in the treatment of these acute intracranial lesions whether a fracture is present or not; if there is a high intracranial pressure, as shown by the ophthalmoscopic examination, and by the measurement of the pressure of the cerebrospinal fluid at lumbar puncture by the spinal mercurial manometer, then a cranial operation is indicated to relieve this increased intracranial pressure both by enlarging the cranial cavity and by the drainage of possible hemorrhage and cerebrospinal fluid; it is not so much a question of removing the hemorrhage as it is of lessening the increased intracranial pressure —whether that pressure is due to hemorrhage or edema—the operative indication is the same; many cases of head injuries at autopsy have revealed no hemorrhage at all—merely a "wet" edematous swollen brain but sufficient to cause medullary compression and the death of the patient.

If an operation is considered advisable to relieve the increased intracranial pressure, then the operation of choice is the subtemporal decompression and drainage; if there are no definite localizing signs of the intracranial lesion, then the decompression should always be performed on the right side in right handed patients in order to lessen thereby any possible operative damage to the adjacent motor speech area of the left cerebral cortex. In these cases, it is not so important to remove the hemorrhage as it is to offset its pressure effects. In cases of depressed fractures of the vault showing definite signs of a high intracranial pressure, it is better surgical judgment to precede the elevation or removal of the depressed area of bone by a sub-temporal decompression so that when the depressed bone is removed, there will be little or no danger of the underlying cerebral cortex being damaged by its protrusion through the bony opening; as the sub-temporal decompression exposes a comparatively silent area of the brain—a portion of the temporo-sphenoidal lobe—its protrusion and possible damage would not appear clinically, whereas a partial paralysis, impairment of sensation or of vision might occur and frequently does result from operations performed over the more highly developed areas of the cerebral cortex. Besides, the sub-temporal route provides not only an excellent exposure of the middle meningeal artery and that portion of the brain so frequently involved in fractures of the skull, but it affords drainage to the middle fossa of the skull—the chief intracranial cistern—at its lowest point at the base of the skull; again, the thinness of the squamous portion of the temporal bone makes the operation a less difficult one technically. The vertical incision (and not the usual curved incision), should be used not only to render the operative hemostasis more effective in that the trunk of the temporal artery is ligated at its lowest point at the very beginning of the operation and therefore there is no bleeding from its branches, but this incision also permits the removal of the underlying squamous bone as far as is possible beneath the temporal muscle—and yet the attachment of the temporal muscle to the parietal crest is left intact so that a firm closure of its more or less fixed. In these cases, the separated muscle fibres is assured; this is a most important point in cases of high intracranial pressure, as in brain tumors, where a cerebral hernia or fungus might result from an imperfect closure of the temporal muscle. The insertion of silver and celluloid plates and other foreign bodies beneath the scalp is to be most strongly condemned.

If the intracranial pressure is so high that the cerebral cortex tends to protrude through the bony opening, it is frequently wiser in selected cases to perform a similar operation upon the opposite side of the head immediately after the first operation; I have been obliged to do this in only five per cent. of the patients; they are the ones having a swollen edematous brain, water-logged as it were, where the drainage of blood and cerebro-spinal fluid is slight and not sufficient to cause a marked decrease of the intracranial pressure; in some doubtful cases, it is better judgment to wait for one or two days and even longer before the second operation is considered advisable. The rubber tissue drains are usually removed on the first or second day post-operative, and the hospital convalescence ordinarily requires at least two weeks. Naturally, these patients should not enter into their former active life for a period of three months and even longer; a too early return to the strain and stress of modern life predisposes them to many complaints—both subjective and objective; repeated examinations of the fundus of the eye and of the superficial and deep reflexes are here most important in estimating the physical normality of the patient.

The end results of patients having brain injuries with or without a fracture of the skull have been an interesting study. It has become quite a common belief that once a man has had a fracture of the skull and then recovers, he is never the same person again. In 1912 I examined the records of three of the large hospitals of New York City during the decade of 1900-1910; the mortality of fractures of the skull was 46-68 per cent.; the mortality of the patients operated upon was 87 per cent.—this high percentage due undoubtedly to the operation being postponed until the extreme stages of medullary compression and oedema, and also to the fact that the operation performed was the "turning down" of a bone flap—a much more formidable procedure than a decompression—and then the bone replaced so that even the benefits of a decompression were prevented; besides, in many cases, the dura was not opened and as the dura is inelastic in adults, therefore no adequate relief of the pressure could possibly be obtained. Of the patients, however, who were finally discharged as "well" or "cured," I was able to trace only 34 per cent. of them, but of these 34 per cent., 67 per cent. of them were still suffering from the effects of the injury—that is, two-thirds of them were not as well as before the injury; the chief complaints were persistent headache, a change of personality of the depressed or of the excitable type and thus emotionally unstable, early fatigue making any prolonged mental or physical effort impossible and thus the inability to work, lapses of memory, spells of dizziness or faintness, and even epileptiform seizures in a small per cent. of them. In examining the hospital records of the patients having these post-traumatic conditions, it was most interesting to ascertain that these were the patients—and there were but few exceptions—who regained consciousness gradually after several days and remained in the hospital for a period of four weeks and longer, whose charts made frequent mention of the severe headache and a low pulse-rate of 60—that is, the usual clinical signs of an increased intracranial pressure; an ophthalmoscopic examination had rarely been made. Many of these patients still showed signs the results of the increased intracranial pressure in their fundi and at lumbar puncture, and these were the ones upon whom a cranial decompression even at this late date caused a marked improvement; the operative findings were always associated with a "wet" swollen edematous brain; many of the so-called post-traumatic neuroses are, in my opinion, frequently superimposed upon this definite organic basis as the result of the brain injury. The treatment, therefore, of brain injuries should not be limited merely to the recovery of the patient as far as life is concerned, but it should also be directed toward obtaining a normal individual—approximating as closely as possible the condition of the patient before the injury.

Besides these neurological conditions frequently benefited by operative procedures, there are still other ones in this field that can be only mentioned in the present paper. The excellent results obtained in those cases of persistent tri-facial neuralgia which, finally, after the failure of all medical efforts, have had the posterior root of the Gasserian ganglion severed, are possibly the most dramatic; the surgery of the peripherial nerves has also made a marked advance within the past few years and especially is this true of the operative treatment of selected cases of facial paralysis. Of the other neurological conditions amenable to surgical treatment, this work is still in the experimental stage.

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THE JUSTIFICATION OF INTRASPINAL MEDICATION IN THE TREATMENT OF CEREBROSPINAL SYPHILIS.*

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The avenues of administration of medication in syphilis are many and varied; orally, by inunction, intramuscularly, intravenously, fumigation, and last but not least, intraspinally. This last named method has come into prominence rather recently, due to intensive investigation of the effect of luetic infection on the central nervous system.

According to the older authorities, and some recent ones, also, syphilitic diseases of the central nervous system may be divided into two classes: first, those due to active invasion of the nervous tissue by the specific organism; and, secondly, those resulting from the action of the syphilitic toxins—the so-called para syphilitic diseases, paresis, tabes and spastic paraplegia. This classification seems faulty and unjustified since Noguchi (1), and others have demonstrated the spirachaeta pallida in the brain of paretics, showing that the organism was actually present and that the resulting clinical manifestations were not the result of the toxins carried by the blood from other foci of spirochaetes in the body.

It is very questionable if a para-syphilitic condition is a separate entity, capable of giving rise to tabes and paresis. Naturally, the toxin of a luetic infection may affect the system to a certain degree, but we believe that whenever we find clinically tabes dorsalis, cerebro-spinal syphilis or paresis, we are dealing with a spirochaetal invasion of the central nervous system.

Accepting this as being pretty generally established, we have directed our medication by the intarspinal avenue for two main reasons which we will now take up for discussion.

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*Submitted as a thesis in Pharmacology, Medical College of Virginia.

First: Intraspinal medication is rational because the meninges are practically impermeable to drugs so that medication given by the various avenues other than intraspinally do not appear in the cerebro-spinal fluid in a concentration sufficient to be of the slightest service. Swift Ellis (2), states that even so highly diffusable a drug as potassium iodide is not normally excreted into the spinal fluid. It is universally accepted that K. I. scatters itself throughout the body, appearing in the various secretions, urine, saliva, etc., in a few minutes, and yet does not appear in the spinal fluid. Flexner (3), corroborates the statement by saying that it has been well established that there is very little secretion of the curative agents from the blood into the cerebro-spinal fluid. We know that by oral administration of bichloride of mercury, 1-20 gr., or intravenous salvarsan, we get a high concentration in the blood stream since the HgC1-2 is very rapidly absorbed from the gastro-intestinal tract, and in salvarsan we place it directly in the blood stream; and yet, with this high concentration, we get practically none of the curative agent excreted in the cerebro-spinal fluid. George Draper (4), states that the well known impermeability of the choroid plexus to foreign substances renders access of parenterally given drugs to the brain and cord difficult, consequently, it is to be inferred that salvarsan, when it is introduced into the blood, comes in very minute quantities, if at all, into contact with spirochaetes lying within the meninges, or in the outer layers of the brain.

Adler's (5) investigations along this line are of particular interest. He appends a table to his article showing the results of examination of the cerebro-spinal fluid for arsenic at varying intervals after the intravenous injection of salvarsan. The results show that, in 15 cases, the spinal fluid gave a **negative** test for arsenic in all instances. These findings are in accord with Ehrlick's, whose conclusion was that the sub-arachnoid space cannot be reached by injection of salvarsan into the blood stream.

Further evidence that arsenic does not appear in the spinal fluid after the intravenous administration of salvarsan is presented by the recent work of Hall (6), Swift (7), Camp (8), and others, their investigations showing that not the merest trace of arsenic appears in the cerebro-spinal fluid after salvarsan is introduced into the blood stream.

Also, Swift-Ellis (9), conclude in their study on the effect of irritation of the permeability on the meninges for salvarsan, that subdural injections of normal salt, normal serum, serum salvarsanized in vivo or weak solutions of cyanide of mercury do not demonstrably increase the permeability of the spinal cord or brain for salvarsan which is circulating in the blood at the time of the subdural injection.

Camp's (12) study of seventeen patients given intravenous salvarsan shows that the spinal fluid did not show a trace of arsenic in but one case.

From the works of the investigators quoted above, it seems entirely rational that the only way of bringing medication in contact with the spirachaete invading the central nervous system is by the intraspinous avenue. We well know that the salvarsan must come in contact with the spirachaeta pallida in order to exert any spirillocidal action, and since this contact is not obtained by other avenues of medication, we must resort to the intraspinous route.

Secondly, the intraspinous avenue of administration is justified because it seems that there is a special strain of the spirachaeta pallida which affects the central nervous system. In this article we will designate the strain, the spirochaeta pallida nervosa.

The cultivation of the causative agent of syphilis has been accomplished by Noguchi (10) of the Rockefeller Institute of Medical Research, and the tremendous importance of his work is becoming more and more apparent, and we are of the opinion that further investigation will prove definitely the existence of the different strains of the organism.

Reasoning from analogy, we know that the gonococcus, streptococcus, pneumococcus and numerous others show various strains, and might not this be true of the spirochaeta pallida? We are well aware of the applicability of the Darwinian laws of evolution to zoological life, and it seems entirely fitting to apply them to the spirochaeta pallida, whose anaroebic nature and existence is a "freak." We know not whether to call it a bacteria, a protozoa, or a sport between the two.

The question of the different strains of the spirochaeta pallida is of vast importance, and if it can be shown that the spirochaeta pallida nervosa exists, then intraspinal medication is still further called for.

From a study of over four thousand Wassermanns, made by Dr. A. C. Belcher, Assistant in Clinical Pathology at the Medical College of Virginia, and myself on inmates of the Eastern State Hospital (white) and the Central State Hospital (colored) of Virginia, and on patients visiting the free dispensary of the Medical College, some striking factors present themselves, showing the rationality of intraspinal medication in cerebro-spinal syphilis. The factors are not named in the order of their importance, but as they will appear in a paper to be published in the near future.

First: Not all insane people giving a strongly positive Wassermann are insane because of the luetic infection; and not all people having syphilis go insane. This deduction to our mind is significant in favor of intraspinous treatment, and offers strong proof for the existence of the spirochaeta pallida nervosa as a separate entity. We hold the opinion that when the individual obtains a luetic infection with the nervosa type of the spirochaeta pallida, and does not have active treatment very early, that rather early the organism will invade the central nervous system, giving rise to the clinical manifestations of cerebro-spinal syphilis. If he receives the strain that does not show a predelection for nervous tissue, the involvement of the central nervous system is markedly delayed.

Further evidence of the existence of the separate strain of the spirochaeta pallida is shown by the report of a case where individuals obtaining their luetic infection from the same source showed the same clinical manifestations of the central nervous system involvement.

Also, in conjugal paresis (11), we have a typical example of the transmission of similar strains of organism from one individual to the other.

Accordingly, if it were possible to detect, either by dark field examination or cultural methods or some yet-to-be-devised method, the strain of spirochaeta present in the lesion, a wonderful advance in syphilis therapy would be made; for then recognizing that the infection was due to the spirochaeta pallida nervosa, intraspinal treatment could be given at once as a prophylaxis along with the intravenous.

Second: Not all cases of syphilis give a positive Wassermann, though we used a sensitive antigen (guinea pig heart cholesternized with 0.4 per cent. cholesterol) in our test, as well as the Hecht-Gradwold modification in border line cases.

Third: The Wassermann reaction on the spinal fluid in cases of central nervous system involvement is a better index to the condition of the patient than the reaction on the blood serum. We have a long list of instances in which the blood serum was frankly negative and the spinal fluid positive, this being due to the fact that the spirochaeta pallida nervosa, while exhibiting at first its antigenic qualities giving rise to reaction-provoking in the blood stream, which persisted but a short time, later attacks the central nervous system, its tissue of predilection, and these reaction-provoking bodies appear in the cerebro-spinal fluid. This deduction is further substantiated by the fact that in this type of cases as the blood serum becomes progressively negative, the spinal fluid becomes progressively positive. And in cases where both blood serum and spinal fluid are strongly positive, we are possibly dealing with a double infection, that is, an infection with two different strains of the spirochaeta pallida.

Accordingly, when the Wassermann is found positive on the spinal fluid, intraspinal treatment is called for emphatically, since (1) the curative agent does not appear in the spinal fluid after intravenous or oral administration in sufficient quantities; (2) we are dealing with a different strain of the organism, the spirochaeta pallida nervosa.

Fourth: Paresis is not as common among the negro as among the white, judging from the clinical diagnosis. A possible factor in the elucidation of this might be found in the fact that the negro does not possess an equal degree of cerebral specialization as the white, or that the psychosis is not as plainly marked and hence escapes recognition.

Fifth: The Wassermann on the spinal fluid is more frequently positive in paresis, less frequently in cerebro-spinal syphilis, and least frequently in tabes dorsalis. Accordingly, we have made it a rule in examination of the spinal fluid to do a colloidal gold cell count, Ross-Jones, Pandy, Noguchi and Fehling's test. In our hands the colloidal gold test has been of particular value in showing central nervous system involvements—the paretic, tabetic, and luetic zone curve designating the condition present with considerable degree of accuracy.

From the deductions drawn, intraspinal treatment is the rational method in treating syphilitic diseases of the central nervous system, since it has been shown that the curative agents are excreted very poorly, if at all, in the spinal fluid after oral or intravenous medication, and that there is probably a separate type of the organism, the spirochaeta pallida nervosa, which makes its attack on the central nervous system, and that the Wassermann reaction on the spinal fluid is the only index of the condition of the patient infected with that particular strain of the organism.

In a paper of this nature advising intraspinal medication in the treatment of cerebro-spinal syphilis, it would be rather incomplete should we not give a method for the administration of the curative agent intraspinally.

To Swift-Ellis we owe the development of the intraspinal treatment. Horsley (13), in 1910 advocated washing out the cerebro-spinal canal in some cases of syphilitic disease with HgC1-2 (1-1000). This method, irrational to begin with, was very fortunately abandoned. Monkeys (Macacus Thesus and Macacus Nemestrinus) were used in the study of the effects of injecting small quantities of salvarsan and neosalvarsan intraspinally, and from the results of a series of cases, Swift-Ellis (14), conclude that the injection of the drug is too irritating as shown by the increased cell count, consisting almost entirely of polynuclear leucocytes, paralysis of the hind legs, and other symptoms of cord irritation.

Mariensco (15), injected thirteen patients intraspinally, using as a rule 4 cc. of a 1 to 800 solution, or about five mgm. of neosalvarsan. In two patients no reaction occurred, while in eleven severe manifestations presented themselves. In eight patients there was incontinence of urine, or else retention, requiring constant catheterization. The segment of the cord controlling the bladder evidently was markedly affected by the injection. In the remaining three cases there was weakness of the extremities, and in one, anesthesia of the rectum, legs and buttocks. Quam diu, O Doctor, will you neglect the results of animal experimentation!

Realizing that salvarsan and neosalvarsan were too irritating to inject intraspinally, Swift-Ellis (16) investigated the spirillocidal action of salvarsanized serum upon the spirochaeta duttoni and found (1) that the serum of rabbits treated intravenously with neosalvarsan and of syphilitic patients treated intravenously with salvarsan or neosalvarsan, has a definite spirochaetocidal action upon spirochaeta duttoni. (2) The curative action of the serum of neosalvarsan-treated rabbits is exercised on mice infected with spirochaeta duttoni. (3) The spirochaetocidal action of the serum of salvarsan-treated rabbits and patients is markedly increased by heating to 56 deg. C. for thirty minutes. This procedure destroys inhibitory substance present in the serum which is not present in the cerebro-spinal fluid.

No doubt this inhibitory substance is the complement which we know is present in the unheated serum, being thermolabile, and not present in the cerebro-spinal fluid.

Flexner (17) has shown that the blood serum has a marked curative effect after treatment with salvarsan and also that milk of mothers treated with salvarsan or neosalvarsan has a curative effect on the syphilitic baby.

Accordingly, it has been found that the injection of salvarsanized serum intraspinally, the modified Swift-Ellis, is the best method we have today for treatment of cerbro-spinal syphilis by the intraspinal route.

The following method is the one which we employ: (1) Withdraw 40 c. c. of blood and allow it to stand in a cool place for two hours. Pour off the serum in a centrifuge tube and centrifuge for five minutes. Pour off the clear serum into a sterile graduate, care being taken not to get any admixture of blood and serum. (2) Preparation of the salvarsan: Boil 105 c. c. of freshly distilled water. Add to this 1-10 gram of salvarsan, neutralized with a few drops of 15 per cent NaOH.

For treatment of tabes dorsalis, add to the above graduate containing the centrifuged serum 0-3 c. c. of the salvarsan prepared according to directions given in (2). Inactivate by incubating for 30 minutes at 56 deg. Centigrade, or placing in water bath for 30 minutes at 56 deg. C. This destroys the complement, the inhibitory substance, which is not present in the spinal fluid. Serum is inactivated before salvarsan is added.

For treatment of general paresis, prepare in the same manner as above, except use 0.5 c. c. of the prepared salvarsan solution instead of 0.3 c. c.

(3) Method of administration intraspinally: Make lumber puncture under strict aseptic conditions with patient in

recumbent position. Withdraw a few cc.'s of the spinal fluid. Attach rubber (sterile) from syringe to puncture needle; allow a few cc's of the spinal fluid to flow through the tube into the syringe; pour in 10 cc's of the salvarsanized serum in syringe; place piston in syringe and inject slowly. Keep the patient quiet in bed for at least twenty-four hours.

Conclusions.

1. Curative agents administered orally or intravenously do not appear in the spinal fluid and hence exert no spirochaetocidal action upon the spirochaeta lying within the meninges and outer part of the brain.
2. There is probably a separate strain of the spirochaeta pallida which attacks the central nervous system, and in order to affect a cure intraspinous medication must be employed.
3. Intraspinal treatment should be carefully controlled by examination of the spinal fluid. This examination including Wassermann reaction, cell count, globulin test, and colloidal gold reaction.
4. Salvarsanized serum is the safest curative agent to administer by the intraspinal route.

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MEDICAL MANAGEMENT OF GASTRIC AND DUODENAL ULCER.

By Alexander G. Brown, Jr., M. D., Richmond, Va.

Surgeons are all too often called upon to perform operations upon ulcerations of the stomach and duodenum. This is because, in a large number of instances, no proper, persistent effort has been made to discover the cause, and remove it and to dietetically treat the patient during that stage of the ulceration when a healing may have been lastingly accomplished. There must be in all cases of ulcer, gastric or duodenal, a stage when healing by granulation may be as complete, effectual and permanent as healing following operative procedure may be later when a wide zone of undoubted injury has been inflicted upon contiguous gastric and duodenal tissue, well within the field of operation.

A large number of cases of gastric and duodenal ulcers are unrecognized. Patients, suffering more or less pain, after or between meals, over long years, accept, with resignation, their affliction, classifying themselves as "dyspeptics." Under this impression they fail to seek diagnosis and treatment. Unless hemorrhage or perforation tragically places them in the hands of physicians or surgeons, they come to cancer with its train of malignant symptoms. This includes a large number of cases. Also, a group of ulcer cases receive inadequate medical treatment, although the existence of ulcer has been recognized by physicians and patient. With enough medical treatment to assuage the pain or to curb the "dyspeptic" symptoms, these patients never permit the complete cure. They are unwilling to submit to a thorough study of the body in order that a search be made for the possible primary cause of the ulcer and to, later, undergo the necessary dietary and medical measures to enable the ulcer to heal. This group either comes to operation or suffers daily pain through years on the road to malignancy.

It must be urged that surgery properly is the method to choose in all intractable ulcers. Cases, having received careful medical treatment, persist in producing pain and hemorrhage should be operated upon. Repeated hemorrhage which either weakens the patient or places the life of the patient in jeopardy, is an imperative cause of operation. Cases that give evidence of possible perforation or obstruction must receive immediate relief in surgery. Besides those mentioned there are other good reasons for operation, but beyond these there are a great number of cases of ulcers which, if recognized early, and proper medical treatment is applied yield to medical treatment.

What is the technique of medical management of ulcer of the stomach and duodenum. (1) Treatment of these cases are as individual as the treatment of a disease like typhoid fever or pneumonia. Each case, owing to various differences in cause, location, chronicity, complications, etc., requires individual course of treatment. Notwithstanding this fact, a general method may be laid off in all cases, modifications being made to suit requirements in particular instances.

The first step in the treatment in the light of recent convincing experimental work by Rosenow and others is to search for a primary focus of infection and remove it. The mouth (and accessory cavities) is often the site of infection which culminates in gastric and duodenal erosions. Infected teeth, alveola, salivary glands, etc., afford the habitation for low strains of bacteria, which by metastasis, by clumping, local microscopic hemorrhage and necosis of mucosa, break down into ulceration. It is a common experience, however, that, although the septic oral foci may be discarded and removed, yet, other foci may be established, beyond reach. From chronic appendicitis, infection of gall-bladder, ulceration of the colon, rectum and anus may secondarily arise. The question of eradicating these points of infection is important and is a surgical one.

Diseases of the blood and blood-making organs should be discovered. All gastric and duodenal ulcer cases should have a complete study of the blood. In all "Wassermann," both from blood and spinal fluid is important, malarial infection, anemia, calcium content, "clotting time;" are some of the questions to be considered in studying the blood. A study of the feces of these patients is important. No case can be intelligently treated without this investigation. Constipation or diarrhea; odor and color; blood (gross or occult); reaction; fatty globules or meat fibers); bacteria (tubercular bacillus; bacillus typhosus); parasites (hook-worm, amoeba; trichomonas) are a few of the common subjects to be investigated in these cases.

A study of the kidneys is important. Renal function as well as chemical and microscopical study of the urine should be known. The heart, liver and lungs should also be studied. A study of the digestion will be the most direct and difficult study in all these cases. The use of the duodenal tube which is administered with least amount of inconvenience may be made without incurring great risk. I have seldom observed distress or excitement in introducing this tube in the stomach.

(2) Fasting. This treatment should be begun only in hospital. Patients receive the suggestion of fasting with no small degree of indignation and rebellion. Besides its undoubted advantage in affording the stomach and duodenum inaction and rest, with all that means to ulceration, the practice settles a mental conflict between the patient and the physician. It establishes with emphasis that treatment has begun in earnest. This impresses the significant thought of its seriousness and importance. In addition, fasting is consonant with recumbency in bed which is another important desideratum in the management of these cases.

I let them fast for 1 to 2 days, unless some commanding reason in the condition of the patient, forbids. Acid intoxication and bodily exhaustion, guide me in the application of the fast. To relieve the dry mouth, ice in small pieces may be regularly given. Extreme care of the mouth is advisable. The teeth should be frequently cleansed and the oral cavity irrigated. All defective teeth and areas of inflamed gums should be carefully treated. If the fast can not be pushed to the point needed the nutrient enema may be cautionusly given. Sometimes these set up pain and may produce hemorrhage; hence, the need for caution.

(3) Diet: To milk we must turn in beginning the food administration in gastric ulcer. But each patient it seems, appears to digest milk in an individual way. The physician must proceed cautiously

with the use of raw and unmodified milk, or else, he may fall into serious gastric and intestinal pitfalls. It may be necessary to modify or digest the milk. But with all, milk with modifications remains the first food for feeding in ulcer of the stomach and duodenum.

I adhere to the general plan as described by Lenhartz. The first day, when starting the feeding, give 210 c. c. milk, and two eggs. Give at 7 a. m. 30 c. c. of milk; 9 a. m. 1 egg; 11 a. m. 30 c. c. of milk; 1 p. m. 30 c. c. of milk; 3 p. m. 1 egg; 5 p. m. 30 c. c. of milk; 7 p. m. 30 c. c. of milk; 9 p. m. 30 c. c. of milk and 11 p. m. 30 c. c. of milk. Making 290 calories.

The second day give 300 c. c. of milk and 3 eggs, (420 calories).

The third day give 400 c. c. of milk, 4 eggs and 20 grams of sugar, (637 calories).

The fourth day, give 500 c. c. of milk, 5 eggs, and 20 grams of sugar, (777 calories).

The fifth day give 600 c. c. of milk, 6 eggs and 30 grams of sugar, (955 calories).

The sixth day give 700 c. c. of milk, 7 eggs, 30 grams of sugar, and 50 grams ground rice, (1,335 calories).

The seventh day give, 800 c. c. of milk, 8 eggs, 40 grams of sugar, 50 grams of ground rice, 15 grams of Zwiebach (153 1-3 grams carbohydrates, 80 1-3 grams proteins, 68 1-3 grams fats. 1,562 calories).

The eighth day give 900 c. c. of milk, 8 eggs, 40 grams of sugar, 50 grams of ground rice, 30 grams of Zwiebach, (160 grams carbohydrates, 85 grams proteins, 73 grams fats. 1,692 calories).

The ninth day give 1,000 c. c. of milk or 400 c.c. of milk and 200 c. c. of 20 per cent. cream, or 100 c. c. of 40 per cent. cream, 8 eggs, 50 grams of sugar, 100 grams of ground rice, 40 grams of Zwiebach, 15 grams of butter (223 1-3 grams carbohydrates, 93 1-3 grams proteins, 89 5-6 grams fats. 2,130 calories).

The tenth day give 1,000 c. c. of milk or 400 c. c. of milk and 200 c. c. of 20 per cent. cream or 100 c. c. of 40 per cent. cream, 8 eggs, 50 grams of sugar, 100 grams of ground rice, 50 grams of Zwiebach, 30 grams of butter, 35 grams of lean beef (weighed raw), (230 grams carbohydrates, 104 1-3 grams proteins, 108 2-3 grams fats. 2,330 calories).

The eleventh day give 1,000 c. c. of milk or 400 c. c. of milk and 200 c. c. of 20 per cent. cream or 100 c. c. of 40 per cent. cream, 8 eggs, 50 grams of sugar, 200 grams of ground rice, 60 grams (two slices), of Zwiebach, 40 grams of butter, 70 grams (35 grams twice a day) of lean beef, 50 grams of lean ham (316 2-3 grams carbohydrates, 127 1-3 grams proteins, 120 2-3 grams fats. 2,908 1-3 calories).

The twelfth day give 1,000 c. c. of milk or 400 c. c. of milk and 200 c. c. of 20 per cent. cream or 100 c. c. of 40 per cent. cream, 8 eggs, 50 grams of sugar, 300 grams of ground rice, 60 grams of Zwiebach (2 slices), 40 grams of butter, 35 grams of lean beef twice a day, 50 grams of lean ham, (396 2-3 grams carbohydrates, 135 1-3 grams proteins, 120 2-3 grams fats. 3,258 1-3 calories).

The thirteenth day give 1,000 c. c. of milk or 400 c. c. of milk and 200 c. c. of 20 per cent. cream or 100 c. c. of 40 per cent. cream, 8 eggs, 50 grams of sugar, 300 grams of ground rice, 80 grams (2½ slices) Zwiebach, 40 grams of butter, 70 grams (35 twice) of lean beef, 50 grams of lean ham (412 2-3 grams carbohydrates, 137 1-3 grams proteins, 122 2-3 grams fats. 3,338 1-3 calories).

The fourteenth day give 1,000 c. c. of milk or 400 c. c. of milk and 200 c. c. of 20 per cent. cream or 100 c. c. of 40 per cent. cream, 8 eggs, 50 grams of sugar, 400 grams of ground rice, 100 grams (3 1-3 slices) Zwiebach, 40 grams butter, 70 grams lean beef, 50 grams lean ham (503 1-3 grams carbohydrates, 147 1-3 grams proteins, 124 2-3 grams fats. 3,768 1-3 calories).

From fourteenth to 21st day, diet is varied including various carbohydrates, rice, cream wheat, oatmeal, malted milk, macaroni, potatoes, peas, onions, asparagus, flavoring with coffee, chocolate, vanilla, caromel—keeping calories in 3,000.

Medical Treatment.—The purposes of medication in gastric ulcer are to quicken healing. Hyperacidity which prevents healing and inflicts pain, must be reduced in degree. An alkalai administered in proper time relation to the acid curve, tends to diminish the concentration of this gastric secretion. Sodium bicarbonate when combined with another alkali in large doses neutralizes the acid of the chyme. When given alone bicarbonate of sodium, may easily become a means of increasing the sodium chloride from which hydrochloric acid is increased rather than diminished. The combination of sodium calcium, magnesia, and bismuth, into suitable prescription for use at various times during the hydrochloric acid secretion of gastric digestion are well known. The important point in the administration is to relieve the pain, as it is an indication of having the acid irritation.

I think no one has exceeded Aaron in stating the advantages and disadvantages of the time honored bismuth treatment of gastric ulcer. After describing it, he says, "I have used large doses of subnitrate of bismuth in the treatment of gastric and duodenal ulcer for over twenty years, without one case showing symptoms of ill effect."

The simple procedure of 2 drahms of bismuth subnitrate in eight ounces of distilled water, of which after shaking, a tablespoonful three times daily before meals, has proved most satisfactory in his hands.

In my cases, silver nitrate has been used for many years with such satisfaction that I have given little bismuth. Particularly since I once observed symptoms of bismuth poisoning in the use of it. This case in continued use of bismuth showed loss of power in the muscles of the legs, (extensors).

Nitrate of silver in connection with extract of hyoscymus and extract of belladonna, given before meals, acts most helpfully in stimulating healing processes while its companion drugs ally pylorospasm, and through the automic nervous system, suppresses excessive secretion—so often a deterring agent in healing these cases. We must use silver nitrate with caution, as we know that in the presence of excess of hydrochloric acid, it tends to increase the hyperacidity. Its use before placing food in the stomach is therefore important in these cases. It is anti-catarrhal and anti-fermentative in doses from one-eighth to one quarter of a grain, it exerts satisfactory effect, in most cases, without producing harmful results. Argyria should always be kept in mind during its administration. In nearly all of my cases, particularly those showing pylorospasm, gastric peristalsis in excess, with hypersecretion, I order a hypodermic of atrophine sulphate 1-60 to 1-120 of a grain administered once or twice in twenty-four hours. The drug exerting its inhibiting influence through the vagus, in this way tends to relieve serious and unpleasant symptoms.

No paper on treatment is complete without discussing the duodenal alimentation method of feeding in cases of gastric and duodenal ulcer. To Einhorn is due the credit for devising a tube which can be easily introduced into the stomach without distressing the patient. It can be comfortably retained for hours and days. It will pass within a short time after introduction, into the duodenum. Through this the patient may be given sufficient food for the maintenance of strength and weight and at the same time permit the zone of ulceration to remain in rest; a condition so necessary in the prompt granulation and healing process sought. The Rhefus tube is one which I use. Its easy introduction is accomplished, after dipping the tube in water, by placing the tip in the pharynx with a swallow of water, the patient, with a little reassuring aid from the physician, quickly and easily, passes it into the stomach. After this it is an easy matter to feed your patient at regular intervals and with measured food of known caloric value. This tube will in a short time pass into the duodenum and the food will have to be modified or partly digested for, if not so treated, violent intestinal disturbance will be experienced.

The post ulcer period is also an extremely important part of the management in these cases. The food and nutrition of the patient must be constantly watched. The patient must be thoroughly relieved of all possible foci of reinfection and the body should be treated as a whole. The patient should be made to understand that the normal is not attained by the relief of symptoms. The proper relation of weight to height should be striven for. To attain this, proper rest periods and out-door recreation should be advised. Many patients will dissent or not take interest in this part of the management and so it is necessary to go into great detail and lay great emphasis upon this feature. Exercises, involving only the simple muscular movements, should be prescribed. These should bring the digestive system into better state of efficiency making for the more permanent and complete healing of the ulcer and freedom from a reoccurrence.

"Tongaline Tablets have given my wife quicker relief from rheumatism, with which she is frequently afflicted, than any other remedy. Tongaline Liquid is one of the principal ingredients in all my prescriptions for rheumatic and neuralgic complaints. Furthermore, I find it very efficacious for a rheumatic condition which I acquire as a result of exposure from riding."

THE USE OF SOLIDIFIED CARBON DIOXIDE IN THE REMOVAL OF BENIGN AND MALIGNANT GROWTHS ON THE SKIN.*

By G. H. Sadelson, M. D., Dermatologist, Charlotte, N. C.

It is well known that within the past few years the medical profession has extended its efforts in preventive medicine more than ever before. Along with the advances made in the etiology of disease, prophylaxis has kept more than even pace. Among other things, the premalignant lesions have received much attention. It is now an accepted fact that by the removal of the many precancerous lesions, true cancer is prevented, and a great many practitioners are advocating the radical removal of extraneous growths, even before they become strictly precancerous, as a wise preventive measure aside from the cosmetic effect which might be desirable.

Among other methods for the removal of the growths on the skin, be they either benign precancerous, or cancerous, I wish to call your attention to the use o fthe so-called carbon dioxide freezing process.

It may be of interest, if I spend a few moments regarding the history of this mode, which we shall be glad to note is of American origin.

Dr. Wm. Allen Pusey, the eminent dermatologist, of Chicago, was the first to use the solidified carbon dioxide in the year 1905. Previous to this, Dr. Dade had demonstrated the use of liquid air in the destruction of growths on the skin before the American Medical Association, and attracted a great deal of attention, with favorable comment. This gave Dr. Pusey his idea, and he soon thereafter brought out his process with the solidified carbon dioxide, which is now considered to be quite as efficient as liquid air, much more convenient, much less expensive and can be manipulated with much less danger.

The article used is the well known carbon dioxide gas brought to a solid form in the following way:

Starting, then, in the form of an invisible gas, it is brought under a pressure of from 850 to 1,000 pounds to the square inch. This converts it into a liquid. It is now confined in tubes or cylinders of steel, and in this condition is purchased of the manufacturer. There has been various devices used to control and hold it as it is drawn from the cylinder for use, but perhaps the best device yet brought out is the one known as the Gooseman apparatus.

The sudden expansion of the gas, now liquid, as it is set free from this great pressure by opening the valve on cylinder causes the gas to freeze into a snowflake looking substance and is thus called carbon dioxide snow. After gathering a sufficient quantity for use, it is then compressed with the apparatus into solid form, having somewhat the appearance of common ice. Now it is punched out of the press having the shape of a crayon and is ready for use. The temperature of this ice crayon is 110 deg. below zero (Fahrenheit). This crayon is now held by wrapping in several thicknesses of chamois skin to protect the operator, and is applied with more or less pressure directly to the lesion to be removed for a varying length of time, scarcely ever exceeding ninety seconds. The longer held in place and the greater pressure the deeper it freezes. The tissues are quickly frozen into solid ice in appearance, which, after the crayon is removed, will thaw entirely out in one or at most two minutes. As we all know, intense cold is an anesthetic, hence the operation is practically a painless one. Shortly after this thawing an erythematous condition is found followed by more or less infiltration and consequent swelling. If the lesion is one where the epidermis is intact, such as we find in the nevi, most warty growths, angiomata, tattoo marks fibromas, etc., a vesicle or bleb will usually form and if the distention is so great as to fear bursting it should be drained by making a small puncture for, of course, we wish to preserve this best of all coverings to protect the wounded tissues underneath.

When, therefore, the conditions are as above, we will find it unnecessary to put on any dressing but in cases where the lesion is devoid of epidermis such as we find in the ulcerative stage of cancer, lupus vulgaris, the condition known as seborrheic keratosis and some others, then of course we would cover with a dressing as we would in any other open wound.

Now we will see the gradual shrinking and drying of the lesion from day to day and a dried scab has covered the spot. Under this ideal covering the healing process goes on until finished; usually requiring from 10 to 18 days. The scab drops off, having served its usefulness, and we always find, providing of course the operation has been properly done, a result as to appearance scarcely discernable from the surrounding tissues. In other words the cosmetic results, are all that could be desired the new made skin being soft and as pliable as the surrounding parts.

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*Read before the Pinehurst meeting of the North Carolina Medical Society, Surgical Section.

It will be of interest, I think, to say a few words in explanation of the action of this intense freezing of the tissues that are operated upon and I wish to impress this because of its relation to the end results which I will speak of again later.

Cranston Low, of Edinburgh, says there are three factors at work:

(1) Thrombosis of the vessels of the blood supply to the lesion frozen.

(2) Direct injury to the tissues by the freezing and thawing.

(3) Exudation of the fluid and cells leading on to absorption of inflammatory products.

The thrombosis of the vessels is undoubtedly an important factor; there is injury to the blood vessel wall and on that injured wall thrombosis occurs.

This plugging of the vessels is a reason why we should not have metastasis in the treatment of malignant conditions and this hypotheses is borne out by the experience of those who have resorted to this mode of operation. I may say that in my own experience I have yet to see a case where I could see that metastasis had occurred in consequence of the process used.

In the direct injury to the tissues Friedlander, of San Francisco says, "The tissues of low vitality are readily destroyed by a reaction that is not of sufficient intensity to damage the healthy tissue."

In other words it is selective in its action. Quoting again from Friedlander, "We have here an agent that can produce sufficient irritative action on the vascular tissues of an angioma for instance, to cause a partial or complete endarteritis leaving however sufficient cells to restore a practically normal skin. Thus it is apparent that the carbon dioxide ice does not act, strictly speaking, as a caustic or cautery since it does not destroy tissue immediately or indiscriminately but the ultimate blanching of the skin and the reaction of the growth is due to an interstitial fibrosis and the obliteration of the vessels. Exudation of fluid cells leading to absorption of inflammatory products plays an important part. The whole frozen area is permeated with lymph and leucocytes; the latter by phagocytic action may remove inflammatory material and the former flushes out the tissues and also brings fresh lymph into the inflamed area.

In summing up then we see, thrombosis and direct injury to the part lowers the vitality or causes the death of the abnormal cells, which are more easily injured than the normal and the inflammatory exudate aids in throwing them off or in absorbing them. Let us note here that the lesion, per se, dies and dries up for want of a blood supply.

Bunch, of London, England, in The British Medical Journal, says, "The resulting scarring is, owing to the gradual transformation of the tissue elements into fine fibrous tissue, much more supple and inconspicuous than when other methods of treatment are employed. Moreover, the exact amount of inflammatory reaction can be controlled, both as regards extent and depth."

The control of this destructive agent by the operator is well nigh perfect for the moment the crayon is removed from the tissue further freezing and consequent destruction ceases and thawing begins. Note the marked distinction between this agent and the various pastes or plasters once so much in vogue.

Personally I have treated angiomas, fibroid growths many nevi, familiarly known as moles, a few birth marks, warty growths of various kinds and some other extraneous growths.

In looking through my case records, which, I regret to say I have not kept but a short while, I find 38 cases of cancerous and pre-cancerous lesions treated by this process. Twenty of them were malignant, running all the way from incipient cancer to conditions where much tissue had been lost and great deformity existed. In these cases, I found only six of these lesions to return requiring from two to several appilcations of the crayon, the case having gone beyond where hope could be held out for more than a suspension of the malignant process, but even in these cases it was a satisfaction to see that I could relieve pain and apprehension and prolong the life of the patient. In 18 truly precancerous conditions there was no return of the growth and I am sure a permanent cure was made in each case.

I pause here to respectfully urge upon you gentlemen th eexpediency of advising your patients who have skin lesions that are precancerous or that may become precancerous, that they should have them removed effectively and at once, as a preventive measure; we owe this, I think, to our clientage as professional men.

I am confident that the time is coming when the general public will be educated to do this and when this advice will be the usual proceeding among the profession.

Such action will be similar to what is now being done regarding the care of the teeth and of the eyes during childhood and this kind of educational propaganda has been brought about within the remembrance of some of you here today.

If, then, cancer is on the increase, as many investigators assert, and if cancer is always preceded by another but benign condition, which is also held, and this benign condition is easily and permanently curable, then the wisdom and obligation of your aid is easily seen.

In conclusion, while I would not by any means wish to convey the idea that this is always the best method to use in every case especially in malignant cases, but I do wish to say that in my advocacy of the use of the solidified carbon dioxide, I believe we have in this a useful adjunct in the removal of extraneous growths for the fellowing reasons: It is inexpensive, it is practically painless in its action, requiring no anaesthetic either local or general, scarcely ever keeping the patient from his usual occupation, it is selective in its action, it is effective and the end results, or what is called the cosmetic results, are excellent.

Hemagulen.

Hemagulen is a physiological hemostatic for local application. It is prepared from fresh brain substance.

Physicians find Hemagulen indicated in all types of hemorrhages from capillaries and small vessels where it can be applied to the bleeding surface, such as after the removal of adenoids, tonsils and other operations on the nose, throat, etc.

Hemagulen may be given orally, diluted with water, in gastric and duodenal hemorrhages.

Dentists use Hemagulen with fine results in checking the bleeding after the extraction of teeth.

Hemagulen is supplied in one-ounce bottles and is prepared by Eli Lilly & Company who will be glad to send literature on request.

NON-SURGICAL OR INJECTION TREATMENT OF HERNIA, HEMORRHOIDS AND HYDROCELE.

By Dr. G. N. Murphy, Paducah, Ky.

Hernia or rupture is a far more annoying, serious and dangerous ailment than it is generally considered. Were it properly attended to when it first shows evidence of appearing, or on its appearance, when it is most easily controlled and cured, much future annoyance and danger would be avoided. The advice frequently given not to pay any attention to a rupture unless it becomes large and troublesome, is a mistake, as the tendency of a rupture, is to become worse. There is also great likelihood of its becoming irreducible.

Of the vārious treatments for rupture the cutting operation and injection method offer the largest percentage of permanent cures. In stating the objection to cutting operations for the cure of rupture, the writer could do no better than to quote the following article by Dr. Souder, of Philadelphia, to-wit:

"A physician who consulted me recently for rupture, stated that h ehad just consulted a surgeon with the intention of undergoing an operation but on learning that the surgeon was also ruptured, he asked the surgeon why he did not submit to the cutting operation himself."

The surgeon replied: "My reasons for not doing so are: First—I do not care to be laid up in bed possibly for several weeks. Second—The operation is not free from danger. Third—Unless the wound be tightly closed around the spermatic cord, it leaves an opening for a future ventral hernia or rupture; and if the cord be sufficiently constricted, it will cause the testicle to wither away."

The writer asserts without fear of successful contradiction that the injection method of treating rupture will make a larger percentage of permanent cures than the knife will make in the hands of the most skillful surgeons, besides it can be employed where age and the risk of chloroform and ether would render a knife operation inadvisable.

The objections urged against the injection method are purely theoretical, incited largely by surgeons upon whose business they see the injection treatment successfully advancing.

They cannot produce the clinical evidence to substantiate their claims. It is called "blind surgery." It is no more blind surgery than passing a urethral bougie or uterine sound. It is said "the inflammation can not be controlled." The effect of a given injection can be foretold by the skilled operator as certainly as that of a dose of morphine, calomel, or any other drug. It is also said to be "dangerous," but inasmuch as many thousands of cases have been treated and cured without the report of a single death, its dangers must be small indeed. One noted rupture specialist in this country says he has given 16,000 injections without a death.

Then after these objections have been answered, they will say it is "quackery" and "won't succeed anyhow."

That the treatment is just as ethical as any other branch of medicine every physician is bound to admit. Also that the treatment is eminently successful is evidenced by the clinical results, and any number of cured patients could be produced, if it was necessary, to prove it.

Among the great advantages of this treatment are the facts, that by its employment in skilled hands nearly every case of rupture can be cured, barring those that are irreducible. Those that can not be cured can usually be much benefited. There is no dangerous operation to undergo, and the patient can attend to his or her regular work and can be cured at the same time. One treatment for a week for from four to eight weeks, is sufficient to cure nearly every case. I should estimate that not more than one ruptured person in five hundred would ever submit to a cutting operation, except for strangulated rupture while one-half the ruptured cases would take the injection treatment if they had the opportunity, and were able to pay for having it done. In case the injection treatment should fail completely in a given case, the patient would not be injured in the least and could still be operated upon with the knife if he so desired. In the hands of a careful operator who has qualified himself to do the work, it is successful to a certainty beyond the expectations of the most sanguine.

All ages seem amenable to the injection treatment of hernia. I have treated children of two years old successfully and one man 79 years old who had a very large double hernia complicated with hydrocele. I cured his hydrocele as well as his ruptures. Thi sman is still living and has been cured nearly three years.

The technique of treatment for hernia is simple and can be carried out with a hypodermic syringe fitted with a needle of suitable length. A 40 per cent. solution of carbolic acid in water and glycerine is what the writer uses. 20 minims of the solution should be injected into the hernia canal near the internal opening. Six or eight of these treatments given one a week is usually sufficient.

I have cured many cases of hydrocele by injecting from 20 to 40 minims of pure carbolic acid into the sac after drawing off the water from the tunica vaginatis. I consider this the very best of all methods of treating hydrocele.

I will detai lthe treatment of one case of hydrocele that is of more than passing interest on account of the age of the patient and size of the scrotal sac. Patient, a negro man 93 years old came to consult me about a scrotal enlargement, the nature of which he was ignorant. The scrotum was near the size of a gallon jug and extended nearly down to his knees. I informed him of its nature and told him I could cure him. He consented for me to treat him. I had him lie down on my office floor and with a large trocar I drew off the scrotal sac or tunica vaginatis one gallon of a straw colored fluid. Without removing the canula of the trocar I injected with a large hypodermic syringe fitted with a long probe pointed needle introduced through the canula 90 minims of pure carbolic acid which I thoroughly massaged in the empty sac so as to cauterize its entire inner surface. The patient was then taken to his home in a buggy and kept in bed for one week after which time he was allowed to go about as usual. His recovery was uneventful and the cure was complete. He lived two or three years after he was cured. This is the only patient that I ever treated for hydrocele that was confined to his bed on account of the treatent.

Hemorrhoids.

The hypodermic treatment for hemorrhoids is so well known to most physicians that I shall only call attention to the fact that it is just as efficient as any other known method of treatment. All forms of hemorrhoids are amenable to the injection treatment, but some forms of hemorrhoids are better treated by other methods. External hemorrhoids should never be injected nor internal tumors that have become strangulated.

The writer uses a twenty per cent. solution of carbolic acid injecting each tumor once a week. From one to three treatments is generally sufficient to produce a cure. All tumors are injected at the same sitting.

ABimkerhoff or Kelly speculum is used to expose the tumors. There should only be enough of the above mentioned fluid injected into each tumor to slightly blanch it.

The writer has used the hypodermic treatment of hemorrhoids successfully for twenty years.

The advantages of the injection treatment for hernia, hemorrhoids and hydrocele is that the treatments can be given without the use of chloroform, ether or other anaesthetics and the patient can go about his work while he is being treated, and the treatment is safe.

POST-OPERATIVE TREATMENT OF GYNECOLOGICAL CASES.

By Marion T. Benson, Atlanta, Ga.

The purpose of this paper is to take up the post-operative treatment of gynecological cases after the wound has healed and the patient is out of bed.

All gynecological cases should be treated in three stages the pre-operative, operative and post-operative. On account of the nervous influence of the action of the ovaries, and the important part which they play on the nervous system of the female, it is wrong to simply operate, and then turn these cases loose. All gynecological cases should be kept under observation for at least one to two years, and if we apply the remedies at our command, we can, in nearly all cases, prevent the nervous wrecks which follow many of these operations, and thereby prevent the neurologists from having to say so many unkind things about the gynecologists, and also from keeping these cases from falling into the hands of quacks—going from bad to worse. This was illustrated only a few days ago, when a patient (who was operated upon by a well known surgeon of our city for a pelvic condition in December, 1917), came under my care. She complained of the usual post-operative pains and aches, and stated that the surgeon who operated upon her did not treat such cases; that he simply operates and then advises his patients to seek relief from some one else for the post-operative treatments. These cases may fall into good hands or may become nervous wrecks or as often go to the advertising quacks or patent medicine.

We frequently hear the remark where we have advised operations, that they do not want to be operated upon because Mrs. So and So was operated upon a year or two ago and she has never recovered from the operation and simply drags around. If these cases had been watched and the different nervous symptoms treated, we would not hear such remarks, and the patient would be in good health. I do not mean those cases in which some secondary pathological change has taken place, but in those cases where it is due to some local condition or nervous influence.

We have at our command a few simple remedies which will cover these cases if applied intelligently. Where double orectomy has been performed, we have Corpora-Lutea in the soluble form, which is given hypodermically. I have never been able to get satisfactory results from the tablet or dry form, but have gotten most excellent results from the soluble. We have the bromides to ease along the nervous influences, where we get depression, and lassitude. Sodium cacodylate given hypodermically is a most excellent tonic, where we have in the intestines, putrefaction taking place and being absorbed. We have the soluble B. B. culture, with the simple sodium bicarb. or sodium citrate to aid us in elimination. Where we want electric therapy, we have the high frequency vaginal electrode, etc.

I make it a rule for my patients to report at my office the first month after the operation, or as soon as they are able to get out on the streets, then I take up each individual case with that I term a post-operative treatment. If a double orectomy has been performed, I give corpora-lutea hypodermically every second or third day, and keep this up until the nervous irritation subsides. Same is discontinued for a period and then repeated until the menopause has been fully established.

Where the patient suffers with backache and sideache often following pelvic operations, upon examination, you will find the uterus enlarged, congested, and more or less fixed. In these cases, the glycerine tampons are indicated and are applied every other day, and if kept up for several weeks will give very great relief. I have treated quite a number of post-operative gynecological cases where they complain of pain in the lower pelvis. With high frequency electrode place in the vagina, I have had some very remarkable results, relieving the nervous irritation in these cases.

Case One.—Mrs. B., age 33. Was operated upon about a year and a half before I was called to attend her. At that time salpingo-oopherectomy appendictomy was performed. She gave a history of excessive bleeding. The bleeding was not relieved following this operation and she was treated with X-ray, which also did not relieve the bleeding. Upon digital examination, uterus was about normal, with slight mass in right lower quarter. She had been bleeding more or less during the past year. I advised second operation, which was consented to and found hematoma of right tube and ovary, practically all ovarian tissue destroyed. I performed right salpingo-oopherectomy. Patient had an uneventful recovery, bleeding stopped but patient became despondent and the usual nervous symptoms developed with loss of appetite and vitality. Patient had been ordered to report to office for observation, but on account of the expenses that her husband had been put to, she did not come. I was called back to see her and found her as stated above. Patient was then put upon corpora-lutea injections every second day with tonic and immediately began to improve, go out socially, and has not had any of the nervous disturbances since the treatment was given.

Case Two: Mrs. R., Age 30.—Was operated upon during my service at the Grady Hospital during the summer of 1917. Left Salpingo-oopherectomy with resection right ovary was performed. Patient made an uneventful recovery and was sent home. About two months after she had been sent home, I was called out to see her by the family, with the statement that she had never been able to leave her bed since being brought home and the family had become very worried and much alarmed. She complained of pain in the lower pelvis and back, was unable to be up and out. Upon re-examination found uterus more or less fixed with tenderness upon pressure. Glycerine tampons were used, and in the course of two weeks, patient was able to report to office and was put under treatment, with high frequency electrode placed in the vagina and glycerine tampons continued. In the course of a few weeks all pain had subsided, uterus had become normal and movable. Patient is now doing her usual household duties and all despondent and melancholia feelings disappeared and is very bright and happy, free from pain and states that she feels better than she has in the last ten years. She has gained 15 pounds in weight.

Case Three: Mrs. C, Age 35.—Was operated upon during my service at the Grady Hospital in the summer of 1917, resection both ovaries (cystic), uneventful recovery and was sent home. In three months a member of the family came to me stating that Mrs. C. was in a very bad condition and had not been able to be up and out or walk any distance since her operation. She was very blue and despondent and wanted to know if there was something that could be done for her, as she was suffering with pain in back and sides, had not gained in weight or strength, etc. Upon examination, I found patient very nervous with pain upon pressure over lower pelvis, backache and very badly constipated, stating that her bowels would not move. This patient had been suffering with a nervous complication and had been treated by neurologists before being sent to the hospital for operations. She was put on the same treatment as case number two, with hypodermic injections of cacodylate of soda, 3 grains, three times a week. Patient is now up walking, been relieved of her pain, constipation, and gaining weight with clearing up of nervous and mental symptoms.

Case Four: Mrs J, Age 35.—Double Salpingo-oopherectomy and pendectomy was performed. Patient had an uneventful recovery after operations and was sent home and reported back to office in about six weeks complaining of pain in the lower pelvis, stating that she thought after she was operated upon, she would be relieved of pain. Upon examination, found uterus enlarged, heavy, patient was put upon glycerine tampon treatments and in the course of three weeks uterus was reduced and she has since been enjoying good health.

Case Five: Mrs. M, Age 25.—Was operated on by me about 18 months ago. At the time of operation patient was aenemic with very low vitality. Operation resection right and left ovaries (cystic) pendectomy. Patient developed skin abscess and on account of low vitality, wound was very slow in healing. Patient was sent home out of town and put under local physician's care. I advised patient to report to the office in the course of two months, which she did not do, but heard from same through neighbors that Mrs. M. was not doing so well and that she was still suffering and did not seem to be very much better than she was before the operation. The end of the year, the patient came into the office stating that she had pains in sides and back and did not feel well. On account of the distance, patient stated she had not been able to report to office but I insisted that she come in twice weekly for treatment. The usual treatment with glycerine tampons with tonics. Patient immediately began to improve, pain subsided and began to gain in weight and strength and for the past six months has been in good health.

These cases will suffice to illustrate my statement that all gynecological cases should be followed up and not dismissed until the different nervous symptoms have been relieved. These five cases were picked at random from my records and are just such cases as we meet with every day. Gynecological operations can do lots of good and lots of harm. If we will tide these cases over the first year or two, they will be greatly benefited and they will forever call you blessed.

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Atlanta, Ga.

ACUTE OTITIS MEDIA.*

By H. M. Bonner, M. D., Raleigh, N. C.

The first symptom of acute Otitis media is, as a rule, pain in the ear. In infants the first manifestation may be convulsions with elevated temperature, and in this event the true condition is frequently undetermined until the tympanic membrane ruptures.

In the presence of convulsions with an elevated temperature and with no assignable cause, the ears should always be examined. No one, of course, would ever fail to examine an ear to which pain is referred even, though the cause should be located in the Larynx or Naso-Pharynx.

Otalgia is the result of nerve pressure and if the pressure be the result of Tympanic or Tubo-tympanic congestion, they come within the scope of this paper. Whether this congestion shall recede the exudate draining through the Eustachion tube, or whether, the exudate be so great as to require a myringotomy depends the diagnosis of Acute Catarrhal or Suppurative Otitis Media. The cause of both conditions being very generally conceded to be an infection.

Few, if any, conditions can be more satisfactorily treated in the acute stages, nor are many conditions more unsatisfactory in their treatment than Chronic Catarrhal Otitis Media. Nor are many conditions fraught with more grave sequelae than Chronic Purulent Otitis Media.

No acute suppurative ear should be permitted to rupture undisturbed. The tympanic membrane may rupture in one day or ten but the patient has suffered needless pain and both his hearing and his life have been subjected to unwarranted dangers. Then, too, the membrane, should it heal, heals with a larger cicatrix and greater deformity than would have followed a proper incision. I use the word "incision" because adequate drainage cannot be had through a puncture, nor can the middle ear be properly irrigated except through a fairly large opening. The dangers from inadequate drainage being Acute Mastoiditis and Meningitis.

It is essential that the acute suppurative ear be cured as speedily as possible; the ever present dangers being Meningitis, Brain Abscess, Labyrinthine disease and sinus Thrombosis. It were needless to add also the slow but continuous depreciation of hearing.

On the other hand, the patients may suffer repeated attacks of ear ache with no suppuration. This means repeated attacks of Tympanic or Tubo-tympanic congestion with an accompanying exudate which results in a thickened mucosa and consequent increased interference with the transmission of sound waves through the middle ear.

Closure of the Eustachian tube causes disturbance of equilibrium and interferes with the accommodation for the lower tones.

Should the Tympanic congestions be untreated, permanent spasm of the Tensor Tympani follows and fibrous tissue develops; this formation being the last stage of all continuous or remittent congestion.

We now have a condition which is designated as Chronic Catarrhal Otitis Media. Many terms are used to designate the various stages of this process but this is the certain termination. It is insiduious in its progress and its pathology is both definite and progressive. The lesion is a Chronic Hypertrophic Otitis Media. The other lesion in the middle ear producing deafness is Tubal obstruction. Aside from dealing with the acute condition per se it is most essential that the predisposing causes be removed.

The greatest single cause of acquired deafness is Adenoids, Ballenger said 66 per cent. It might not be amiss to say that the careless or improper removal of Adenoids may, by reason of subsequent cicatrices, itself induce deafness—by closure of the pharyngeal orifices of the tubes, any decrease in intratympanic pressure being pathological. Any condition which interferes with proper nasal breathing may be termed a predisposing cause.

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*Read before the Seaboard Medical Society at Norfolk, Va., December, 1917.

Any infection of the accessory sinuses, whether active or latent, is likewise predisposing. Adenoids are a menace to the middle ear, largely by reason of the fact that they harbor germs, most children being able to breathe through the nose in spite of their presence. No patient who is slightly deaf should be dealt with lightly, carelessly, since the more chronic the condition the more unfavorable the prognosis, and when a patient becomes cognizant of any depreciation in hearing, if it be a chronic catarrhal condition, "The day is far spent," our sense of hearing being normally very much in excess of our needs

In these days when we think so largely in terms of conservation it is, I take it, very important that we do not neglect so great a factor as the hearing of our patients; this fact alone being, I take it, sufficient excuse for this paper.

Loss of Power to Produce Sarcomatous Transformation in the Stroma of Carcinoma—Woglom (Jour. Cancer Research) premises that certain changes which have been found in the stroma of carcinomata are sarcomatous. This is not a constant possession of the carcinoma cell, for the Flexner-Jobling tumor lost this power between the fifth and eleventh generations. Similar findings have been reported in four other tumors. The neoplasm described by the author was found in the left inguinal mamma of a female of unknown age on March 17, 1914. The sarcomatous transformation of its stroma was lost after the fourth generation, and this power has not been regained up to the twenty-first generation. It recurred in one mouse in each of the first, second and fourth generations and in two mice of the third. The percentage of successful inoculations varied from zero to one hundred, and the growth was fairly rapid and usually continuous. The tumor type was an adenocarcinoma; alveolar areas were often encountered and keratinization was frequent. The stroma was not especially cellular. In the sarcomatous areas the characteristic halos of lightly stained cells encircling the cancer cells were seen. The author raises the interesting question "whether mouse tumors containing keratin may not, perhaps, induce sarcomatous development in their stroma more often than other types of carcinoma."

Puerperal Septicemia Treated by Autogenous Vaccine, with Recovery.—Grier (British Med. Jour.), reports the case of a woman who had a twin labor, the first child delivered in breech presentation and the second in vertex. There was a slight tear of the perineum. The patient continued well until the afternoon of the eighth day, when she felt hot and flushed. On the following morning she complained of pain behind the left shoulder. She became nauseated and vomited freely. The temperature was 101 deg. F., and the pulse 100. The lochia was not foul and there was an abdominal tenderness. The secretion of milk was abundant. She had superficial inflammation of the gums associated with carious teeth. The patient complained of rheumatic pain in the left shoulder and over the left elbow. On the seventh day the temperature rose to 104 deg. F., pulse 120 to 130, the secretion of milk had ceased, and there was severe pain and tenderness. The temperature continued high, and the patient had severe chills chiefly at night. She complained of pain in the right groin. The inguinal glands were swollen, enlarged, and were associated with a pustular eruption on the pubic. On the ninth and eleventh days of her illness she was given 20 to 25 c. c. of antistreptococcic serum, and on the thirteenth day 25,000,000 streptococcic vaccine, made from a fatal case of puerperal septicemia, were injected. An autogenous vaccine from the patient's own blood was prepared, the culture being a pure growth of a short-chained diplostreptococcus. Of this, 25,000,000 organisms were injected on the sixteenth day of her illness, and on the eighteenth day 50,000,000. Every third day after this she was given 50,000,000 until near the end of her illness, when she had 75,000,000. She ha da well-marked, fine, discrete, papular rash resembling scarlatina, appearing first on the face, neck, chest, and upper extremities, and on the following day on the lower portion of the body. The eruption did not itch and desquamation occurred after the eruption had disappeared. This was followed by a fall in temperature, and then a rise from a pus formation over the right shoulder. After this had been opened the temperature gradually fell to normal. The writer is inclined to believe that the case was one of scarlet fever developing during the puerperal period.

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EDWARD C. REGISTER, M. D., EDITOR

CHARLOTTE, N. C.

"SURGEON-GENERAL GORGAS 63 YEARS YOUNG."

The above is the title of an editorial of more than passing interest in the current issue of that most excellent exponent of medical thought and sentiment, The Southern Medical Journal, and which it is safe to say will be read and quoted far and wide as a well-timed appreciation of the very splendid service rendered the nation by one who has easily been one of the greatest doctors ever honored with the high position so efficiently filled by General Gorgas as the medical head of the Nation's army.

Without question the opportunities which have come to Dr. W. C. Gorgas were most unusual. Equally true has been the measure of completest success with which he has forcefully met and coped with some of the most tremendous difficulties ever faced by any medical man in ours or any past age in the history of medical science and professional opportunity. Other doctors of skill and acknowledged ability had faced the difficult Panaman sanitary situation, but none were permitted to rise to the full majesty of the occasion, and win perpetual renown as the foremost sanitarian of this or any past age. Such honor the fates had reserved for this fine Southern gentleman, this skilled scientist and learned sanitarian, this able leader of the best of his age in advanced medicine, and hence the name of Dr. Wm. C. Gorgas will be ever be remembered in the annals of the profession as one to speak of with respect and veneration, and a name with which to inspire young men to the development of their best.

What the attitude of President Wilson and his advisers will be when Surgeon Gorgas' term of office expires, we do not know, but we do know that he has made a wonderful success in the administration of the affairs of his great post, that he has worked indefatigably for the development of medical service of the U. S. Army, raising it in the short space of only a year from less than 500 to more than 20,000 physicians, that with little friction this great work has gone forward in a way that was an inspiration to other lines of army activity. With a profound appreciation of all that General Gorgas has done, and a firm belief in his continued great capacity for useful service, we believe the medical profession of the country will cordially approve of the President following the dictum of wise Mr. Lincoln who laconically remarked, "It was bad time to swap horses when crossing a stream."

RELATIVE VALUES OF MEDICINE AND SURGERY.

The greatest surgical clinic under one management that the world has ever known, has been built up with very little attention to medical therapeutic measures.

The same young physicians starting in the same way as internists—the same natural-born organizers—the same positive brotherly loyalty—the same open financial honesty—the same fidelity to high medical ethics—all these working through the same number of years as exclusively medical, as has their work been exclusively surgical, and no such medical clinic of world-wide note would have resulted. An the reason for the different outcomes of the life's work is, that people put a higher value upon the worth of surgery ,than is put upon medical treatment.

Equally critical, hard, and unsentimental analysis of medicine and surgery does not leave either branch of the profession of medicine very greatly exalted over the other, in its benefits to mankind. The one who analyzes will find very much of lessening of human suffering in both medicine and surgery; but that which furnishes the enthusiasm, and which pays the bills for the building up of a surgical clinic, is something outside of the matter and fact of surgery. And on the other hand that which refuses to build a medical clinic, is something outside of the real value of medicine to humanity.

The glamour of surgery, builds the surgical clinic. The unostentatiousness of medicine, chills approbation. The ledger fact is, that the medical patient pays barely as much as the treatment is worth, while the surgical patient pays much more than the treatment is worth. That is not only a ledger fact, but it also a scientific fact. Medicine can not prove that it ever saved an arm or a leg. Surgery amputates the leg, and says it has saved three-fourths of the body. At least that's the way the patient looks at it. And he is willing to pay many times as much to surgery for the removal of the leg, as is the man who has been through the same disease, and who has come out with two whole legs, willing to pay to medicine. The man would possibly be willing to pay more, if medicine could show conclusively that it had saved the leg; but medicine falls down under the burden of proof. The same thing is true in medical treatment of disease everywhere. The self-respecting physician who understands the history of disease, is conscious of the fact that the medicine he gives has very little influence upon the outcome of the disease. The conscientious educated man can not assume an air of great importance, and so the patient only fees obligated to pay for the respect that he has for the physician; and as the patient is likely to have as much respect for himself as he has for the physician, there is ever the suggestion for him to let one account balance the other.

The patient feels too that in the matter of medical education—or at any rate in the matter of medical information he is on a level with the physician; but when the surgeon takes a hand, the patient regards himself as a martyr, and the patient's friends await in awe outside for word from the operating room. All are willing to pay for what they have been through.

It needn't be said that there may be as little. It isn't skill that the patient is paying for. The patient is paying for the impression that surgery has made on him. And that is the way the patient looks at his bill for medical treatment. Notwithstanding the impossibility of proving the worth of medical treatment of disease—in the same way as surgery proves its worth—notwithstanding that fact, the medical handling of the ills to which flesh is heir is worth many times more to suffering humanity, than is the handling done by surgery, because medical treatment handles so many more.

WHAT IS SHELL SHOCK?

Very many surgeons are at present trying to analyze shock. As is always the case in pathologic studies, they are trying to find the initial neuromental point of break-down, from which point has come the general physical demoralization.

If that point could be definitely determined, and then if that point could be so fortified that it would stand the tremendous stresses of battle, then shock might possibly be prevented. And too in the treatment of shock if the particular function that had given way under strain could be definitely known that knowledge would be of great helpfulness. It would seem that then the broken link in the chain of orderly systemic functioning might be restored.

At once though, analysis runs up against the physiologic fact of interdependence of function, and the analyst flounders in unintelligible chaos. Because so far as physiology can show there is no one function that itself first starts, and thus puts in motion the other functions of the body. Neither can physiology show that the derangement of any one function may not be compensated by changes in other functions. And it comes about that the one who tries to analyze shock simply finds himself confronted with complete systemic demoralization. The wreck has happened; and apparently each single secretion is abnormal, and is in turn exciting every other secretion abnormally.

In a very interesting manner, and also in a manner that shows the intricacies of the problem of shock, H. Roger, in Review de Medicine, for July and August, 1916, takes up the study of "Nervous Shock." His conclusion is that, "Shock affects nearly every cell of the body." He does not attempt to prove which grouping of cells was first deranged, but is content to assume that all cells were deranged simultaneously. The innumerable cases that have been studied since his article was written, have not in the reports of those studies, thrown more light upon the deep pathology of shock, than is given by Roger.

The view of Roger makes him treat shock by treating the whole body. Physically, mentally, and morally he would treat shock. The ever present acidiosis, and the consequent lessening of carbon dioxide are the two pathological conditions of greatest importance. Practically the two conditions mean the same thing; that is to say the respiratory center is inhibited by the presence of these conditions. The respiratory center must be looked upon as the seat of life.

He maps out to the physician a difficult, painstaking, trying task in the treatment of many cases of shock. The matter of shock is one that every physician ought to be thinking about. Our country will have the care of many many such wrecks.

NEUROTIC DISTURBANCES.

Something of very common occurrence in the lives of neurotics and also of many who do not manifest marked neurotic disturbances, is a feeling that people in authority or of a social position higher than theirs, are made of clay different than that which enters into the composition of all mortals. It is a rather strange conception, yet one which has a ready explanation.

This feeling is a great handicap to an individual. It gives rise to emotions and altitudes which prevent the sufferer (for an individual so constituted does suffer), from producing his best efforts under the circumstances.

Let us take a very common example—a medical university, for instance. At such an institution the students as a rule have reached an age, at least between 18 to 22. In other words, they are full grown men. Yet what frequently is the attitude of the teaching staff, especially the heads of the teaching staff, to the student body. In but rare instances is there an attempt on the part of the teaching staff to impress the student body with a feeling that it (the student body), is tackling a job which by good, hard, conscientious work, it can successfully accomplish, and thereby with the same tactics, after leaving medical school, be able to rise as high in the medical profession as the teaching staff has risen. At least the student may hope to rise as high. There is but little attempt made to wipe out the chasm or distance between teacher and pupil. In reality no distance exists, but it is a reality for many a student.

After graduation, the same attitude (one of distance), the young physician meets in his contact with consultants. These latter so often take "the know it all' 'attitude, impressing the general practitioner not so much perhaps with what the consultant does already know, as with what there is for the general practitioner still to learn; impressing the latter, unconsciously no doubt, with a feeling that he (the general practitioner), is unable to master so many things.

The same thing holds true in other walks of life. In business life the employer keeps himself aloof from the employe, as if the two were made of different material, or as if the former were endowed with superhuman qualities.

This attitude brings about in the mind of him who holds himself inferior, emotions of fear, embarrassment, envy and at times also hate. Surely the attitude is anything but a healthy one.

What is the origin of this? It is not far to seek. The instance of the medical school portrays to some extent the situation that exists in the college and the school. Going back one step further, we reach the home—the parent and the child—and it is the attitude of these two individuals that is the deciding factor. It is not the contention that the schools and colleges create an attitude so unfavorable for the proper approach of a student towards his curriculum (and life in general), but that these institutions take no cognizance of the existence of such a phenomenon, but unknowingly raise what is a weakness in the pupil into a still more predominant feature of his emotional make-up.

It is in the home, between parent and child, or older and younger brothers and sisters, that a feeling of awe is instilled into the little one. To the latter, that which an older one does is invested with unbounded wonder and admiration. The parent, or older one, in the eyes of the child, is the embodiment of might, power, wisdom, good, or evil, or whatever attribute the child believes the older one to possess. Strange as it may seem, in the case of very many individuals, this attitude never disappears, even with advancing years.

What a great handicap it is to one so constituted may very readily be surmised. Such an individual, though often successful, yet constantly feels his (supposed) inferiority, thus robbing himself of the enjoyment of his success. On the other hand, he who has failed attempts to obtain some consolation in the thought that the successful one is so much more competent than he, and that on that account he, the failure cannot hope for success.

Much can be done to obviate this handicap to success, or to its full enjoyment when it does come, by attempting, in the child, to get it to feel on a friendly, frank footing, in all matters with its elders at the same time maintaining towards the latter the respect and consideration due them.

SOME USES OF ARTIFICIAL LIGHT

Radiant energy properly directed is a very potent factor in the amelioration and cure of many conditions, which if neglected, tend to chronicity and incurability. Radiant light and heat projected from a high candle power lamp or set of lamps in a properly constructed hood, parabolic in type, will be thrown in parallel rays, and when directed to a part of the body continuously for a limited time, will produce hyperemia to any desired amount. It is of utmost importance that these rays be projected in parallel, because of their evenness of distribution.

When focussed, the hyperemia is most intense in spots and not evenly distributed, causing burning effects which do not give the same satisfactory results.

When light alone is desired, the large tungsten lamps are used, but when radiant light and heat are necessary, we use the carbon filiment lamps. In most cases in which hyperemia is desirable, the latter type must be used, as the infra-red rays from the carbon filiment lamp are the ones that have the deep penetrating power, and are as well the heat rays. They are the rays that have low rate of frequency and greater wave length, and therefore effect to relieve conditions in tissues to which the luminous rays do not penetrate.

The hyperemia produced is in response to stimulation of the vaso-motor centres, from the periphery. The greater rush of blood to the tissues prevents injury from an excess of heat projected there. The influx of phagocytes must necessarily be great, and the physiological conditions, such as nutrition and metabolism, are materially improved.

Realizing these effects of radiant light and heat, their therapeutic value is easily appreciated.

In the treatment of war wounds, the use of light and heat has been of the greatest value, and is being more and more used as time advances. In some of the base hospitals, the fixtures are more or less crude, but as the usefulness has been demonstrated, the equipments are being rapidly perfected with correspondingly good results.

A year or more ago, Crile recognized the value of radiant light and heat in the treatment of war wounds, and upon his return from abroad, he introduced this method in the Lakeside Hospital. He considered that irradiation of the open wounds without dressings was an important part of the treatment, as he believed that a considerable part of the discharge was due to the irritating effects of the dressings.

It is an open secret that the medical profession has been little aware of the potency of this line of therapy, but the time has arrived when they must awaken. It is too large a subject to be adequately treated in a short editorial, therefore it will be left for later notice. It is timely, however, to call attention to this subject from the present day needs, brought about by the present war, and to ask the medical fraternity to lay aside prejudice, so long extant, and use all methods which show any value or usefulness in the relief of suffering humanity.

EDITORIAL NEWS ITEMS

Dr. J. R. Ballance, who up to recently has been practicing medicine at Willard, N. C., has moved to Bolivia, N. C., his present address.

Doctor Layton B. Hovis, formerly of Charlotte, North Carolina, and who entered the medical corps of the United States army last summer, has recently been promoted to the rank of captain.

South Carolina Medical Association.—This Association was held in Aiken, S. C., recently, and the new officers elected for the ensuing year were as follows: President, Dr. James A. Hayne, Columbia; Vice-President, Dr. E. T. Kelly, Kingstree; Dr. S. M. Pitts, Saluda, and Dr. H. D. Hall; Secretary-Treasurer, Dr. F. A. Hines, Seneca (re-elected).

About the middle of May the command of the Base Hospital at Camp Greene was taken over by Maj. Geo. A. Renn, M. R. C. U. S. Army, succeeding Lt. Col. Sheep ordered to other service. Major Renn has been the very capable Adjutant since the organization of the Base Hospital, is familiar with every detail of its management, and will continue to fully maintain the established reputation of this hospital as one of the best in the service.

Dr. Hugh Tate Moore, formerly of Wilmington, North Carolina, and captain in the United States Medical Corps, died April 10th at Camp Kearney, San Diego, Cal. Dr. Moore was a successful specialist of Wilmington for several years, confining his practice to the ear, nose, and throat. He was for several years on the staff of the James Walker Memorial hospital. He was not only a prominent physician, but a citizen who had the respect and admiration of the city and community. He graduated from Tulane University, New Orleans, in 1913. He was licensed to practice medicine in North Carolina in 1913, and he joined the State Medical Association in the same year. He was a native of Tennessee.

The Southwestern Sanitary Association.—The last annual meeting of this Association was held in Knoxville, Tenn., May 21st and 22nd. We understand that this meeting was a success in every respect. The next annual meeting will be held in Rome, Ga. The exact date will be later fixed. Dr. Carlton, Health Officer of Winston-Salem, N. C., was elected President for the ensuing year. The other officers elected were as follows: Clarance E. Smith, Greenville, S. C., Secretary, Treasurer, and Vice-President, Tennessee, Dr. R. C. Smith, Newport, N. C., J. H. Apperton, M. D., Durham; South Carolina, Davis Furman, Greenville; Georgia, V. H. Bassett, M. D., Savannah. The Association begins with this meeting, publishing an annual pamphlet, or bulletin descriptive of its meetings.

Lt. Col. Wm. L. Sheep, M. C. N. A., who has been Commanding Officer, Base Hospital, Camp Greene, Charlotte, N. C., since the opening of the camp in 1917, has been assigned to duty as Commanding Officer Over-seas, Base Hospital Unit No. 54, which he is now organizing at Camp Greene Bas Hospital. To say that Colonel Sheep, a North Carolinian and an alumnus of the University of North Carolina, has greatly endeared himself to the numerous doctors who have served under him during the almost one year of his residence at the Camp here, inadequately expresses the respect and esteem so strongly cherished for him. Not only is this the universal sentiment of the official staff, but citizens of Charlotte who have had the pleasure of his acquaintance appreciate the Colonel as one of the finest medical gentlemen it has been our pleasure to kno win many a day. Over-seas, or where he may go, he will carry with him the kindly recollection of many sincere friends who wish for him every success and honor attainable by a doctor in the army possessed of great medical ability, administrative efficiency of the highest order, and with it all, and best of all, the splendid capacity of bearing himself under any and every circumstance as well becomes a gentleman of the finest character.

Dr. Benj. K. Hays, Oxford, N. C., Secretary of the North Carolina State Medical Society, and recently re-elected for another term, has been commissioned Captain in the Medical Reserve Corps U. S. Army, and being ordered to active duty has placed the affairs of the Secretary's office in the hands of Dr. L. B. McBrayer, Sanitarium, N. C., who will care for the interests of the State Medical Society during the absence of Dr. Hayes in the national service. Dr. McBrayer is a gentleman of wide experience, and no interest of the organized profession will suffer in his competent hands. He will edit the annual volume for the Society and care for the multifarious concerns which render the position of secretary one of much responsibility. Captain Hays is at present stationed at Ft. Oglethorpe, Ga., and his many friends wish for him a successful career of patriotic service in our great international purposes.

The Chicago Meeting of the A. M. A.—The sixty-ninth annual meeting of the American Medical Association will be held in Chicago, June 10 to 14, 1918, with general headquarters at Hotel Sherman, North Clark and West Randolph Streets. The executive committee is composed of the following members: Dr. Ludwig Hektoen, chairman; Dr. Charles J. Whalen, secretary; Dr. William A. Pusey, treasurer; Dr. John W. Fowler, Dr. Hugh T. Patrick, Dr. Malcolm L. Harris, Dr. Frank Billings, Dr. James B. Herrick, and Dr. Charles E. Humiston. The local committee of arrangements, with headquarters at 25 East Washington Street, is actively engaged in perfecting plans for the comfort and entertainment of the members of the association and their guests. The chairman of the subcommittee on clinics, Dr. Charles F. Humiston, announces that there will be five days of clinics in connection with the meeting, beginning Thursday, June 6th, and continuing up to Tuesday, June 11th. The Section in Miscellaneous Topics, with Major Frank Billings as chairman, will consider the re-education and rehabilitation of disabled soldiers. A complete program will be given later. On Wednesday evening, June 12th, there will be a general meeting at which men who have been active in the medical military service of the United States will take part, and Thursday evening will be devoted to a patriotic meeting which will be addressed by men prominent in public affairs. Tentative arrangements have been made for the meeting places of the various sections and the scientific and commercial exhibits. All correspondence with the local committee of arrangements or any of its subcommittees should be addressed to 25 East Washington Street, Chicago.

Maj. Jos. H. Way, one of the active members of the Base Hospital staff at Camp Greene, Charlotte, N. C., is spending a few weeks at the Rockefeller Institute, New York, for the purpose of receiving advanced instruction in some of the most modern methods of this great scientific institution.

Banquet to General Gorgas by Mecklenburg County Medical Society.—Perhaps the most noteworthy of the various banquets given by the medical profession of Charlotte, N. C., was the elaborate dinner in honor of Surgeon General Wm. C. Gorgas and General Robt. E. Noble at the Manufacturers' Club on the evening of May 13, 1918. The attractive banquet hall was appropriately decorated, and almost the entire membership of the Mecklenburg County Medical Society were present with guests from the Base Hospital specially invited to do honor to Surgeon General Gorgas and General Noble. The arranging of the occasion was in the hands of a committee of Dr. B. J. Witherspoon, President of the County Society, assisted by Drs. Jno. Q. Myers, P. M. King, and J. R. Alexander.

President B. J. Witherspoon gracefully acted as toast master, introducing speakers after a very substantial repast had been served. The several gentlemen addressing the banqueteers were as follows:

Dr. B. J. Witherspoon, Presiding.

Dr. J. P. Munroe, "Our Guests."

Surgeon General W. C. Gorgas.

General Robt. E. Noble.

Dr. A. J. Crowell, "Our Council of Defense."

Dr. I. W. Faison, "Our State Medical Society."

Dr. John Hill Tucker, "The Patriotism of the Mecklenburg County Medical Society."

Mr. A. L. Smith, Rev. Dr. J. L. Caldwell and Mr. Chase Brenizer, each also spoke briefly. The addresses of General Gorgas and General Noble were the special features of the evening, portraying as both did, particularly interesting features of the medical service being rendered patriotic physicians and explaining many helpful details. Both stressed the imperative necessity of the most hearty co-operation of the profession, and General Gorgas specially mentioned the splendid part taken by the North Carolina doctors, and referring particularly to the prominent part played by Mecklenburg County in having already in active service, the large majority of them entering in 1917, more than 37 per cent. of its entire medical profession.

At the conclusion of the banquet Surgeon General Gorgas, attended by General Noble and his aid, left for Washington, D. C. In addition to the members of the Society present there were also present the following invited guests from among the more than 150 medical gentlemen now stationed at Camp Greene and the Base Hospital: Lt. Col. W. L. Sheep, Maj. Geo. A. Renn, Maj. F. W. Palfrey, Maj. J. F. Hubbard, Maj. W. E. Gates, Maj. G. J. Adams, Maj. T. J. Burrage, Maj. Jos. H. Way, Maj. C. P. Brown, Maj. M. L. Morris, and Maj. J. D. MacRae.

Focal Infection in the Etiology of Skin Disease—Chipman (Jour. of Cutan. Dis.), arranges the dermatoses possibly due to focal infection in six groups: (1) Those related in some way with joint affections, such as erythema nodosum, erythema multiforme, gouty eczema, psoriasis; (2) those which apparently were more or less neuropathic in character, such as lichen planus, lichen simplex (Vidal), herpes simplex, herpes zoster, neurotic eczema, alopecia areata, dermatitis herpetiformis, scleroderma, vitiligo; (3) those related to tuberculosis as erythema induratum, lupus erythematosus, lupus vulgaris, lichen scrofulosorum, various tuberculides; (4) those arising from a focus in the skin itself, as impetigo contagiosa, infectious eczematoid dermatitis, various streptococcic infections; (5) those having some relation to anaphylaxis, as eczema, urticaria, erythema multiforme, angioneurotic edema; (6) miscellaneous affections, such as rosacea, granuloma annulare, chilblains, Raynaud's disease. In a study of 50 consecutive cases of diseases belonging to these groups a very large proportion (49) showed infection of the teeth either alone or in connection with infection of the tonsils.

PRESENTING SERVICE FLAG TO THE MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA, PINEHURST, N. C., APRIL 16, 1918.

Presentation: L. B. McBrayer, M. D.

Acceptance: Maj. Jos. H. Way, M. R. C., U. S. A.

From the day of Esculapius until this day of opportunity the medical profession has been known of all men as the one profession that devotes itself without stint to the service of others. The medical profession is the one profession that lives that others may live and when necessary as willingly dies that others may live. How like the Great Physician.

Knowing the altruism of the medical profession, even to sacrifice, it is no surprise that our Government in the present emergency should single us out as a class of men in this country that could be trusted to volunteer their services in numbers equal to the needs, and I am informed that only one state has furnished a larger percentage of its physicians than has North Carolina, and the North Carolina Medical Society and the 345 stars on that Service Flag tell the story, in language that burns.

Our Government recognizes as no Government in the history of the world has ever recognized the important part to be played by the medical profession in winning this war for liberty, that the world may be made safe for Democracy. It at last realizes that a soldier killed by disease is as dead as if he were killed by German guns; that a soldier maimed by disease is as much disabled as if maimed to the same degree by the gas or liquid fire or bombs of the Huns; and when it is striving to its utmost to produce the greatest efficiency possible in its armies—the armies with the flag and the armies at home—it presents to our profession the greatest opportunity ever offered to a class of men; to prevent disease among our armies with the flag and to prevent disease among the armies who are left at home; to care for the maimed in our armies, whether caused by disease or bullets, and likewise for those who are left at home, and our profession responds as one man, in tones so voluble that they reverberate round and round this bleeding world of ours in accents almost sublime: "Here am I; send me!"

It is, then, meet that those of us who are not privileged to join the colors and follow our flag Over There should remember and do honor to those who are privileged to go, and the Service Flag is one of the emblems of this remembrance and this honor.

This Service Flag is presented to our Society by two women who know our profession and honor it and love it; for the one has a husband and a son, and the other a husband, a father and a brother who belong to it. The threads that stitched the stars of blue on the background of pure white were beautiful threads of gold, but as tender and loving hands deftly placed the stars and stitched them there, the threads were found to be crimson; for the needle each time pricked the very heart and the thread each time was drawn through heart's blood of these two women; for near the beginning they stitched a star in place for a beloved first-born and an elder brother.

But with love and devotion to our profession, and with loyalty and patriotism for our Government, like many a mother's tear that remains unshed, the crimson is kept beneath the surface.

"Dear Service Flag in the window there,
Hung with a tear and a woman's prayer,
Child of Old Glory, born with a star,
Oh, what a precious flag you are!"

On behalf of Mrs. L. B. McBrayer and Mrs. P. P. McCain I present to the Medical Society of the State of North Carolina this, their Service Flag.

Acceptance.

Major J. Howell Way, Waynesville, N. C.: Mr. President, ladies and gentlemen, Major Long would have done me a great personal kindness as well as prepared you for the worse yet to come had he told you that I was an honored substitute, advised about fifteen minutes ago of that fact, a substitute to my friend Major Laughinghouse, one of the most distinguished physicians and most talented orators in the profession of North Carolina; but the Major did not see fit to so advise you, and in the service Iam precluded the privilege of talking back to him. Hence, I am deprived of the opportunity of having time and encumbering a stenographer, like our good friend, Dr. McBrayer has, to prepare you an address fitting the occasion and the audience. Naturally, I cannot refer to Aesculapius in beginning my remarks, but I can do better than that for a beginning. I can start with good Mrs. McBrayer.

Some years ago, when the State of North Carolina in its wisdom—for that Legislature was like all of our legislatures—wise in its deliberations as well as in its own purposeful conceit, when the Legislature in its wisdom turned the State institution, tubercular sanatorium, over to the State Board of Health. we made a hurried trip down there; the location was beautiful, it was natural, it was immature, it was undeveloped, and we looked about, my colleagues and I, for a man, for a definite, settled plan of action. We made some changes, we finally settled on Dr. McBrayer to come there and develop that institution and develop the work in North Carolina. We consulted him and we consulted the better part of the McBrayer house, Mrs. McBrayer. I have watched the evolution and growth of the Sanitarium. Yesterday afternoon it was my privilege and my pleasure to visit the institution for the first time in more than a year. It is not like any State institution in this State or any other State it has been my privilege to visit. I would not have known it was a State Institution. It seemed to me, ladies and gentlemen, just like a bgreat big home, and if you had been away from your home about a year, you would know the wealth of meaning in that sweet word. It impressed me as being a great big home, filled with more or less invalid people, with comfort and interest manifested on every point, with the reflex of the kindliest character and treatment shown in every face, and hovering over all the broad mantle of tender human sympathy. I ran all over the place, I even went into the McBrayer house; I saw the pictures on the wall; I know where the clock is sitting; I took in all the details, and the thought that was uppermost in my mind was "We made no mistake in getting the McBrayers here." And I was thinking more. I thought in the future years when I get back home and this war is ended, and the women of North Carolina have come into their just rights as equal citizens with you, sir, and me, and some one writes a biographical history of men of America, a companion volume to "Men of Mark in North Carolina" and calls it "Women Who Have Helped North Carolina," I trust the likeness of that good woman and a word portrait painted with kindly touch ,will portray the genuine sterling integrity of character, sincerity and earnestness of purpose, and the kindly housewife and motherly traits of that good woman, Mrs. McBrayer. It will be done!

There was a time, sir, in the history of North Carolina when we made history and we did not write it, but North Carolina has gotten beyond that, we have passed into a period, we have seen other States write history in which they received tributes of merit that belonged to Carolina people, we are thoroughly awake and our history will be written by our own people.

God bless the noble inspiration of Mrs. McBrayer and her daughter, Mrs. McCain, that impelled them to make and to have here this evening that beautiful flag.

Do you know I declined a fe wminutes ago to make this talk when a civilian gentleman spoke to me about it, and later Major Long spoke to me requesting I do so. I looked at the insignia of rank of his collar and said, "Certainly, sir, I will do it." That is training, friends, the army life is going to bring to five million, maybe more millions than that of men, before the world is made safe for humanity.

You know, I don't look on this war as a great scourge to this Nation. I look on it as a benediction, as a blessing, a sacrifice of untold joy and beauty and benefit to this Nation of ours and its people.

Now Iam just talking in a rambling sort of way, praying every moment somebody will say, "Time is up." I am just talking in a friendly, conversational sort of wav of what comes into my mind as I ramble.

This Medical Reserve, for which yon flag waves, this little body of 345 members of my profession, who have signified their willingness to go, to sacrifice all, to put themselves in the attitude of being called, and ordered and sent, men who are accustomed in their communities to be directors of things, placing themselves in the position to know what the strong hand of discipline is; it is a great purpose, a great experience for them.

Suppose I tell you just a moment in a spirit of friendly intimacy how I came in. I made out my application for membership in the Medical Reserve, it lay on my desk, I did not sign it. It has been years since I sat in my office and just thought about something as I did that day. I am usually writing or reading or talking to somebody or busy. I read that application that afternoon after I had filled it out, I read it again that night and late at night I signed it. I shut my office door and went in the house and it seemed to me that when I stepped on the porch I was going into my house with a feeling that I never entered my home before. It was not that I did not feel at home, but I felt like I was gone. I wasn't certain whether it was my home or not. I could not quite understand myself, and you know how dry North Carolina is now—that was just a little over a year ago—I know I was all right and straight! I went up to my bedroom, tapped gently on the door, my wife was asleep. I turned the light on, she did not awaken. I looked at her face, wondered why she didn't wake; I felt so lonesome; I wished she would wake; I walked out on my sleeping porch and I looked out on those beautiful and blessed Carolina mountains of ours, the moon was shining; I looked at my wife's face again as I came back into the room, wished she would wake but she did not. I never felt as lonesome in my life before, or since, as I did that night. She didn't wake. I went to bed. I realized that I was about to take what I felt, since the day of my marriage, was the most important step of my life. Friends, that is the way I felt about going into the army. That is the way I have felt about it ever since, and yet it was a privilege.

The world had been good to me, the profession of this State had kindly given me all of its choicest honors that were all appreciated so much, my friends had been good to me, I had an attractive home; my loving wife and my children were around me and my little sweet granddaughter was just learning to talk. Did any man have any reason to leave his home less than I, except impelled, dominated, overwhelmed with this spirit, my country calls me; America needs me; it is my duty to go, and I went. What the future may have in store for me in this war, where I may go, whither I may be sent, I know not, none of us in the army know; we do not study about that, our only thought is to do our duty the very best we can. Ladies and gentlemen, I am free to say to you that that spirit of self-effacement, that spirit of service to the country, that patrotic impulse to listen to the call of the Nation, was the animating desire of the men whom those stars stand for. God bless them each and every one! God bless you, my friends, God bless dear old North Carolina, her native sons, her sweet daughters, God bless us all! May each one of us rise up and put forth to the utmost limit of our strength every thought, every desire, every purpose, every energy for power that is within our very souls, to never cease every effort in our capacity until the power of Germany is forever broken and the dominant influence of American Democracy reigns triumphant throughout the earth, the glorious handmaiden of and second only to the religion of the Lord Jesus Christ.

On behalf of the Medical Society of North Carolina, I accept this beautiful flag and promise you the lustre of its many stars, along with that of those yet to be added, shall not be dimmed by the acts of the noble medical gentlemen represented!

The N. C. Optonal Draft Board.—Governor Bickett has named the following gentlemen of the North Carolina Medical profession to serve as the Optional Draft Board authorized by unanimous vote of the State Medical Society at the meeting in Pinehurst last month:

Dr. Cyrus Thompson, Jacksonville.
Dr. M. L. Stevens, Asheville.
Dr. A. W. Knox, Raleigh.
Dr. R. F. Yarborough, Louisburg.
Dr. F. R. Harris, Henderson.

The personnel of the Governor's appointees could not be improved on in the state, and we congratulate both he and the profession of the wisdom of his selections.

The Board met in Raleigh recently and organized by electing Dr. A. W. Knox, chairman, and arranged for the printing of forms for the use of the selective draft. It is earnestly hoped the work of the Board may proceed with all possible speed commensurate with a due regard for intelligent deliberation as there is already manifest a disposition on the part of a few physicians in counties which have so far, contributed few or no doctors to the army service, to rush into the places vacated by brave men who have heard the Nation's call and responded. A case in point recently attracted some attention where a community in 1917 had parted with four of its seven physicians to the army duties, promptly on the heels of the announcement of the action of the State Medical Society a physician removed fro ma county that had contributed practically nothing to the nation's medical service, to this town and it was stated in the press on his arrival that he "was locating there with a view to conforming to the expressed wishes of the State Medical Society in distributing the medical men of the state where needed as there had been no removals from his home town." We submit to the real men of the North Carolina medical profession that all such removals and changes of location by physicians at this time are ethically questionable, and worthy of the careful consideration of the Optional Draft Board appointed by Governor Bickett; and respectfully urge that the Board in taking census of the physicians of North Carolina will consider such gentlemen as bonafide practitioners as of their places of residence at the date of the action of the State Medical Society in Pinehurt, N. C., April 18, 1918. Such anticipatory action by self-respecting men of the profession was never contemplated by the men anxious to secure ample service for both nation and the people at home, and neither an intelligent profession nor an enlightened public conscience will tolerate it.

Conservation of the Doctors by Patients and the Public.—At a recent Red Cross meeting in Charlotte, N. C., Dr. I. W. Faison, retiring President of the N. C. State Medical Society in an address asked from the public a measure of kindly consideration, conservation, in the matter of making over-frequent, unnecessary, and oftentimes useless night calls on the physicians left in the communities, especially those from whom heavy contributions have been withdrawn for service in the army. The subject evoked a responsive chord in the audience, and has been the topic of more than on eeditorial utterance from the leading dailies of the state, each endeavoring to impress on the average man or woman, that a very large portion of the night demands made upon medical men could be cared for during the preceding or following day, and that too without material detriment to the welfare of the sick.

Medical men have long been aware of the fact that ,aside from obstetrical and accident calls, more than nine tenths of the night calls of the average doctor are useless from the patient's point of his actual needs, and by charging, as is almost everywhere the accepted rule, double fees for such visits or consultations, have sought in a measure to restrain patients from making such demands. Once fully understanding that during the present war, at least, there will be, and now is such withdrawal of practitioners for the army and navy work, as to make such conserving on the part of the public advisable, it is doubtless true people will grow more considerate, and call less for their family doctor at unseasonable hours.

It is well in this connection to be reminded that for four years now, both England and France have ceased to graduate doctors, their ranks are constantly growing less each year from the incidence of war as well as the operation of the usual mortality laws, and only within the present year has the latter country found it necessary to take over and hold for the actual use of the government all practitioners of medicine and surgery in the republic, permitting, of course, the attending professionally so far as is possible all really sick patients, but having it performed as a government function with such restrictions as practically operates to reduce the superfluous calls. Many American doctors could easily obtain work abroad, and it is only a question of time when the demands of the allies grow more insistent for needed aid.

The American people are each month growing more and more determined to leave no stone unturned to crush the power of the Hun, and when people realize they must, and should, conserve the powers and capacities of their home doctors, they will readily exercise a degree of intelligent consideration which will be appreciated by the men of the guild, and in no wise distract from the profession's capacity to serve successfully its mission of mercy and service to humanity. Verily, the opportunities of help by the conscientious men of medicine were never quite so great as now, and rising as the doctors are, in the main, to the full measure of their splendid responsibilities to humanity, the public will conserve on this line, and help their doctors when ever possible by refraining from unnecessary calls, especially nocturnal.

The Palatability of Cod Liver Oil.

One of the great disadvantages attaching to the use of plain cod liver oil has always been its lack of palatability and the patient's ability to continue taking it for any considerable length of time.

It was to overcome this disadvantage that brought about the preparation of Cord. Ext. Ol. Morrhuae Comp. (Hagee), a product that contains the essential qualities of the plain oil and yet which does not subject the patient to its disagreeable features.

Cord. Ext. Ol. Morrhuae Comp. (Hagee), offers every therapeutic advantage of the plain oil and is palatable, so much so that it may be continued indefinitely.

BOOK NOTICES

Labratory Methods of the United States Army, Compiled by the Division of Infectious Diseases and Laboratories, Office of the Surgeon-General, War Department, Washington, D. C. Illustrated. Price $1.50. Lea & Febiger, Philadelphia and New York, 1918.

This number of the Medical War Manual corresponds in size to those previously published. As is wellknown, this series of books are published partly for the Medical Corps United States army, and for that class of readers they are invaluable, and every physician or surgeon ought to buy these numbers as they come out. This number is the sixth volume.

Lessons From the Enemy. How Germany Cares for Her War Disabled, by John R. McDill, M. D., F. A. C. S., Major, Medical Reserve Corps, U. S. Army. Illustrated. Price $1.50. Lea & Febiger, Philadelphia and New York, 1918.

This is one of the most interesting of any of the volumes that has been published. The folded map that is found at the beginning of the volume gives the German Sanitary Service in the war, and it is well worth studying.

It goes into detail of the emergency litter, its use, etc. It gives several illustration sof field kitchens, portable water tanks, and many other practical and indispensable things that an army surgeon ought to be more or less familiar with.

The illustrations are certainly numerous and appropriate, and illustrate the text well.

Transactions of the Thirty-Ninth Annual Meeting of the American Laryngological Association. Held at Atlantic City, N. J., May 28th, 29th, and 30th, 1917. New York. Published by the Association, 1917.

Modern Operative Bone Surgery with Special Reference to the Treatment of Fractures, by Charles George Geiger, M. D. With 120 Illustrations. Price $3.00. Philadelphia, F. A. Davis Company, Publishers. English Depot: Stanley Phillips, London. 1918.

Possibly no department of medicine or surgery has made more rapid advancement than bone surgery in the last two or three years.

This volume deals with this specialty alone, and is up to date; well and intelligently written, and for the surgeon who does work dealing with bone surgery, or who intends to do a great deal of this kind of work, cannot very well get along without this book. Its 120 illustrations fully illustrate the text, and, of course, as is known by everyone, a book on a surgical subject at this time, is not appreciated without appropriate and a sufficient number of illustrations.

The book contains 286 pages, well printed and beautifully bound. It is a good book, and we take pleasure in recommending it.

Dietotherapy, Nutrition and Diet in Health. By William Edward Fitch, M. D., Major Med. Res. Corps, U. S. A., Formerly Lecturer on Surgery, Fordham University School of Medicine; Assistant Attending Gynecologist Presbyterian Dispensary; Attending Physician to the Vanderbilt Clinic, College Phys. and Surgs., New York City, and Forty Contributors. Volume 2. Price $7.00. Published with the permission of the Surgeon General of the Army. D. Appleton and Company, New York and London, 1918.

The second volume of this very valuable work contains 798 pages, and corresponds in its general architectural appearance to that of the first volume. The contributors to Volume No. 2 are the following well-known writers:

A. M. Benedict, A. M., M. D., F. A. C. S., Captain M. R. C., U. S. A., Consulting Gastro-Enterologist, Buffalo Hospital, Buffalo, New York.

William E. Fitch, M. D., Major Med. Res. Corps, U. S. A.; Editor Pediatrics, New York City.

H. S. Grindley, B. S., Sc. D., Professor of Animal Nutrition, College of Agriculture, University of Illinois, Urbana, Ill.

Winfield S. Hall, B. S., M. S., M. D., Ph. D., Professor of Physiology, Northwestern University Medical School; Lecturer on Dietetics, Mercy and Wesley Hospitals, Chicago.

H. Lyons Hunt, M. D., L. R. C. P. (Edin.), Capt. Med. Res. Corps, U. S. A.; Prof. of Medicine University Medical School, New York City.

George N. Kreider, A. M., M. D., F. A. C. S., Capt. Med. Res. Corps, U. S. Army.

H. Edwin Lewis, M. D., New York City.

A. Bruce MacCallum, A. B., M. D., Lecturer Biological Chemistry; Sen. Fel. in

Medical Research, University of Toronto, Toronto, Ont.

E. E. Smith, Ph. D., M. D., formerly Professor of Physiology and Biological Chemistry, Fordham University School of Medicine, New York City.

This volume contains 19 chapters written by the gentlemen named above. The titles of these chapters are as follows:

Food Preservation.

Preservation of Food by Dehydration.

Scientific Cookery.

Hygiene of Eating.

Various Factors Bearing on Diet, Digestion and Assimilation.

Overfeeding and Underfeeding.

Protein and Nutrition.

The Significance of Lipoids and Vitamines in Animal Metabolism.

The Caloric Method of Feeding.

General Nutrition and Mineral Metabolism.

Scientific Feeding of Nitrogen Foods.

Diet in Health.

Diet in Critical Physiological Periods.

Hygiene of the Intestines.

Physiological Requirements of Infant Feeding in Health.

Special Diets.

Preparation of Special Beverages and Foods.

Army and Navy Rations.

Food Economics in War.

The thirteen illustrations are thoroughly appropriate, and are well worth studying. Among them might be mentioned the illustration entitled: Comparative Fuel Value of the Food Rations of the Soldiers of the Leading Armie sof the World. Certainly all of us ought to be interested in the comparative food value of the rations given to soldiers in different parts of the world.

The necessary amount of food for people at different ages, for men and for women, under various circumstances, is fully considered, and if studied, the advice and information here given is invaluable knowledge for the medical man.

We do not hesitate to recommend this book. It is a splendid book, full of first class literature.

Workk of the Medical Corps.

The work of the Medical Corps in this war is not merely that of caring for wounded men. A core comprehensive understanding of it will be gathered from the following paragraph in a new book entitled, "With the R. A. M. C. in Egypt," about to be issued in this country by the Funk & Wagnalls Company:

"The functions of the R. A. M. C. in war time are many and onerous. Foremost among these stands the preservation of the health of the troops. The paramount object towards which the Army Medical Service directs all its energy and knowledge is the maintenance of fighting efficiency; and this can only be assured by a high standard of physical fitness throughout all ranks. The work of preservation of bodily health among the individuals collectively forming an army has endless ramifications. The physical training of the men must be systematically looked after. Food must be of the right constituents, quality, and quantity. There must be constant and sufficient supply of potable water. Clothing of the troops must be adapted to the exigencies of the climate of the country wherein operations are proceeding. Camp-life must be rigorously supervised, the choice of camping sites carefully made, the disposal of excrement of men and animals, as also of all camp refuse, systematically carried out. All this falls within the province of the Medical Service."

In the light of this description it may be seen that much benefit must be derived from such a book as "Health for the Soldier and Sailor,"—a book that should be in the "kit" of every member of our American Army as a reinforcement of the Medical Corps duties.

Late Urticaria Pigmentosa.—Hartzell (Jour. Cutan. Dis.), reports two cases of urticaria pigmentosa beginning the one at twenty-three years of age, the other at nineteen ,and calls attention to the increasing number of cases of this affection reported as beginning at or after puberty. Although the affection still remains practically a disease of infancy and early childhood it is probably much less infrequent in adults than has hitherto been supposed. Graham Little in a series of 142 cases collected from the literature and his own observations found no less than 14 per cent. beginning at or after puberty. While these late or delayed cases correspond in their symptoms in the main with the early ones, they also, i na considerable number of cases, have exhibited more or less marked departures from the typical cases. The adult cases have rarely shown lesions of the xanthelasmoid type. Attention is likewise called to the often insignificant role played by urticaria in the symptomatology and the consequent inappropriateness of the name by which the affection is known.

Miscellaneous.

EXAMINATION QUESTIONS MARYLAND BOARD OF MEDICAL EXAMINERS.

Surgery.

1. Give the differential diagnosis between acute catarrhal conjunctivitis and gonorrheal ophthalmia.

2. Give symptoms and treatment of acute catarrhal otitis media.

3. Give symptoms and treatment of tuberculosis of the hip joint.

4. What technique and treatment would you employ for a gunshot wound of the leg?

5. What do you understand by a Colles fracture? Give signs, symptoms and treatment.

6. What are the symptoms of a chronic luxation of a semi-lunar cartilage of the knee joint? Give treatment.

7. Describe rodent ulcers. Give their common locations and treatment.

8. Name the varieties of goitre and mention the indications for surgical interference.

9. What is the most frequent dislocation of the shoulder? Give diagnosis, two methods of induction, with after-treatment.

10. Give diagnostic characteristics of (a) varicose, (b) tubercular, (c) luetic ulcer.

Obstetrics and Gynecology.

1. What changes occur in the breasts during pregnancy?

2. How can you predict the day of confinement?

3. Give some of the causes of abortion and premature labor.

4. In the case of twins, how can you tell from the placenta whether they are from the same ova or from different ones?

5. What is strictura uteri, and what is its treatment?

6. What are some of the dangers of precipitate labor?

7. What is the chief cause of hemorrhage prior to the time of labor, and what is your treatment for this condition?

8. Under what conditions would you do an internal podalic version, and describe in detail how you would perform it?

9. Give treatment of vaginitis of pregnancy.

10. Differentiate between a sloughing myoma and a cancer of the uterus.

Practice.

1. Give the differential diagnosis between measles and scarlet fever. What complications are likely to accompany or follow scarlet fever, and give their treatment.

2. Give the symptoms, physical signs and differential diagnosis of acute lobar (croupous) pneumonia.

3. Give the eitology, diagnosis and treatment of cirrhosis of the liver.

4. Give the clinical symptoms, laboratory findings and differential diagnosis of Hodgkin's disease.

5. Describe in detail how you would manage a case of typhoid fever so as to prevent its spreading. Tuberculosis. Diphtheria.

6. What is psoriasis? Give its symptoms and treatment.

7. Give the causes, clinical symptoms and treatment of arteriosclerosis.

8. Give the symptoms and treatment of chorea.

9. Give the causes, symptoms and treatment of acute ileocolitis in a child one year of age.

10. What are the chief causes of convulsions in children and infants?

Pathology.

Give pathology of:

1. Acne vulgaris.
2. Acute otitis media.
3. Pernicious anemia.
4. Angina pectoris.
5. Locomotor ataxia.
6. Tuberculus meningitis.
7. Acute nephritis.
8. Dental caries.
9. Reynaud's disease.
10. Duodenal ulcer.

Physiology.

1. State causes of pressure in the arteries, capillaries and veins.

2. Name some of the bodily states which lessen the alkalinity of the blood.

3. Describe the process of osmosis and give examples in the human economy.

4. (a) Name the secretions of the alimentary canal, their reactions and functions. (b) Name the active principles of the digestive secretions.

5. (a) Describe bile and its uses, where first found. Trace its course. (b) Name the bile salts.

6. State the general classes into which foods are divided, and give examples of each.

7. (a) What are the functions of the skin and its appendages? (b) What matters are excreted by the skin? (c) How may the function be affected as to the

amount of excretions?

8. (a) Describe the functions of the kidneys. (b) Do both kidneys constantly act? (c) How does the impairment of the functions of the kidneys affect that of the skin and lungs? (d) Give the variations within limits of health in the specific gravity of urine.

9. Describe nerve-cells and fibers.

10. (a) Define reflex action, and give example. (b) Give illustrations of morbid reflex action.

Materia Medica.

1.Tartar emetic. The official preparation and dose as an expectorant and as an emetic and the incompatibles.

2. (a) Name six official preparations of mercury. (b) Name two alkaloids of opium.

3. (a) Give the official name and dose of Epsom salts, Rochelle salts and Glauber's salts. (b) State strength of dilue hydrochloric acid as compared to absolute acid.

4. What is incompatibility in medicines, and what are the different kinds of incompatibles? Give example of each.

5. How does an antagonist differ from an antidote? Give examples.

6. (a) Define briefly electricity as a remedial agent. (b) Define massage.

7. (a) Name the official preparations of zinc. (b) Mention the alkaloids of nux vomica.

8. Name a vesicant derived from the animal kingdom, one derived from the vegetable kingdom, and one from the mineral kingdom.

9. (a) Define antiseptics. (b) Name two intestinal antiseptics most generally used. (c) Name three most generally used externally.

Chemistry.

1. Describe phosphorus, and name and give formula of three (3) of its compounds.

2. Why should solutions of silver nitrate not be employed after irrigations with salt solution? Illustrate by formula.

3. Ho wis chlorine made, and what are its chemical properties?

4. What are simple and what are compound proteids?

5. What is glucose? Why is it sometimes employed in solution intravenously?

10. Define toxins and antitoxins, and mention some conditions in which serum therapy has proven successful.

Therapeutics.

1. Name four salts of sodium and special uses.

2. Write two prescriptions in official terms, without abbreviation, containing three ingredients ;one a stomachic, the other for acute rheumatism.

3. Therapy of nux vomica—preferable preparations, and mode of administration.

4. Acid tannicum—therapy and preferable preparations.

5. Emetinae hydrochloridum—therapy and administration.

6. Epinephrina—therapy and administration.

7. Parraffinum—therapy and method of use.

8. Therapy of hydg. bichlor. and hydg. chlormite.

9. Three salts of ammonium—therapy of each.

10. Therapy of belladonna—symptoms of overdose and treatment.

Anatomy.

1. Define marrow, periosteum, compact and cancellous bone, epiphysis, diaphysis.

2. Bound the superiod carotid triangle, and name the contents of same.

3. Name the organs of generation in the male and female, and describe the ovary.

4. Define hernia, and name and locate all hernias which occur in abdomen (not traumatic).

5. State what muscles enter into the formation of (a) anterior wall and (b) floor of pelvis.

6. State definitely the result of cutting in living subjects the following nerves: Radial, peroneal, pudic, anterior femoral (below Poupart's ligament).

7. What anatomical structures pass through the sphenoidal fissure (foramen lacerum anterius).

8. Name salivary glands, and locate orifices of their ducts.

9. Through what vessels does blood pass in going from spleen to under surface of middle toe.

10. Name bones and ligaments entering into formation of ankle joint.

6. Name three (3) hydrocarbons, and give formula. Name three (3) carbohydrates, and give formula.

7. What is Fisher's solution? What is its chemical effect when administered by the vein?

8. Describe two (2) important chemical tests used in examining stomach contents.

9. Describe two (2) important chemical tests used in examining urine.

10. What chemicals are used in purifying water for drinking purposes, and how are they employed?

A Course of Instruction in Venereal Diseases.—David Watson, lecturer of venereal diseases, University of Glasgow, says that in view of the recommendations of the Royal Commission on Venereal Diseases, medical schools are faced with the problem of providing their students with special instruction on the diseases popularly included under the term "venereal disease."

As there is no class at present in the curriculum to which it would be possible to refer the teaching of this subject, the establishment of a new class will be found necessary, and the course will require to be compulsory, otherwise only a percentage of the students will attend. No expedient, such as including a question on the subject in one of the medical or surgical papers of the final examination, especially when such question is neither set nor checked by the teacher, will succeed in insuring the attendance at a voluntary class of the majority of students. The General Medical Council may solve the question in one of the three following ways: (a) The establishment of a new dermatology class; (c) the division of the subjects between a dermatology class of genito-urinary surgery, both compulsory. The last method would be the ideal one, but, unfortunately, in addition to imposing two new classes on the student, it is a plan which it would be possible to realize at present in few medical schools owing to the paucity of genito-urinary clinics. In these circumstances it may be of service to give a short sketch of a venereal disease clinic and its course of teaching, based on the experience gained at Glasgow, where a university lectureship was established some years ago.

Watson has charge of a venereal department at the Royal Infirmary and also of the Lock Hospital for Women, and the instruction is given at these institutions. In each there is both an outdoor and an indoor department; in the indoor treatment room is attached to each ward and there is a central operating theatre. The outdoor department (which should have an evening hour of attendance), consists of a waiting room, an examination room, a treatment room, and a bacteriology room, all in series.

The examination room is divided into compartments by screens or otherwise, each containing an examining table; the work is thus expedited without sacrificing privacy. An instrument cabinet, dressing tables, wash-hand basins, and a sink complete the furnishing of the room. In addition to the usual surgical instruments and sterilizer, the special instruments include cystoscope, urethroscopes, storage battery; urethral probes, knives and cauteries; catheters, Watson's sounds, flexible bougies (filiform, acorn-tipped, an olivary), hot sounds, syringes, irrigating stand, urological basins, and salvarsan apparatus.

The bacteriology room should be supplied with a good microscope, having an oil immersion lens and dark-ground illumination, an incubator at 37 degrees C., and also stains and apparatus. Tubed media can be obtained from the regular bacteriological department as required. Wassermann tests are performed only in the regular pathology department.

The treatment room in the department for male patients should have a number of cubicles each containing a urinal, and, at a height of 4 1-2 feet above the urinal, a two-quart glass reservoir with attached rubber tubing for the irrigating solution. The most efficient means of treating gonorrhea we have at present at our command is the grand lavage method of Janet. This can quite well be carried out by the patients themselves in a standing posture, but a trained attendant must be in attendance at treatment hours. He supplies each patient with a sterilized cannula, explains the details of the procedure, sees that the whole process is properly completed, and keeps a record of attendance. With this provision, a patient suffering from acute gonorrhea can, during the first week, attend twice daily for treatment and with decreasing frequency thereafter, at hours to suit his own convenience, and he is only required to see the medical practitioner in charge at stated intervals.

The course of instruction includes at least twelve lecture demonstrations. By a selection of cases systematic teaching and clinical instruction can be combined. In additio each student is given the opportunity of practicing the technique of the various methods of diagnosis and treatment, the class being divided into sections of not more than six for this purpose. Prominence is given to the clinical features of the course.

Syllabus of Course; Twelve Meetings.

1. Historical and general survey.

Acute gonorrhea in the male; anatomical and physiological data; bacteriology and pathology. Each student collects specimens for bacteriological examination.

2. Diagnosis of anterior and posterior urethritis; treatment of gonorrhea, practice of grand lavage, etc.

3. The complications of gonorrhea and their treatment; the preparation of vaccines, etc.

4. Chronic gonorrhea, its diagnosis and treatment; use of bougies, sounds, urethroscopes, etc.

5. Gonorrhea in women and children.

6. Urethritis simplex; venereal sores; balanitis; technique of examination to prove patient free from infectivity; prophylaxis.

7. Syphilis. Pathology; primary syphilis; classification of chanchres; demonstration of the Spirochaeta pallida. Each student secures and examines specimens.

8. Systemic invasion; skin and mucous membrane manifestations; Wassermann reaction; methods of taking blood and serum specimens praictised.

9. Late appearances of syphilis: syphilis of internal organs.

10. Syphilis of the nervous system; withdrawal of cerebro-spinal fluid for examination.

11. Congenital syphilis; syphilis of eye and ear.

12. Treatment of syphilis. Each student during the course administers salvarsan intravenously, and also practices intra-muscular mercurial injections.—Brit. Med. Jour.

The Grading of Milk in Small Communities.—Williams (Am. Jour. Public Health), states that prior to the enactment of the Sanitary Code in New York State, comparatively few small communities had progressed very much in grading the milk supply. Although it has decided limitations, the grading of a milk supply is by far the most satisfactory method of improving the sanitary quality of the milk supply of a community. For a number of years the 3 first-class cities in the State of New York have kept the milk supply under a satisfactory system of supervision, but in the 7 second-class cities only 1 had any system of grading the milk supply and of the 47 smaller cities of the State, that is, having a population of less than 50,000, only 2 made any definite attempt to grade their milk supply prior to the adoption of the Sanitary Code. The adoption of this code has caused an improvement in the milk supply throughout the State of New York. The articles of this code charge every municipality with the duty of supervising its milk supply through its health officer and his agents. They consist in the inspection and scoring of dairies and the classification of the milk into grades, according to the dairy score and bacteriological count. The tuberculin test and bacteriological count are required for certified and grade A milk and physical examination, excluding tuberculous cattle for grade B milk. Previous to the adoption of the Sanitary Code, the village of Saranac Lake worked out quite an effective system of grading its milk, the three grades adopted being very similar to those adopted later by the State Department of Health. The city of Ithaca started in 1909 to improve its milk supply. The milk was graded on the basis of bacteriological counts and on the standard score card. A physical examination of all the dairy cattle supplying milk to the city was required and the dairy scores, giving the bacteriological count and grading for the month were published. In other small communities some provisions have been made for grading the milk supply and an improvement of the scores and bacteriological counts has been noted but this work was limited. However, since the adoption of the State Milk Code many incorporated villages and small cities are now actively carrying on campaigns for grading their milk under the direction of the health officer and an effort is being made to explain to local dealers the meaning of the regulations which require the grading of milk. Thus at the completion of the first year of work after the adoption of the milk code, a great improvement is shown in the milk supply of small communitties throughout the State.

A Graphical Study of the Epidemiology of Poliomyelitis.—Hull (Am. Jour. Pub. Health), concludes from his studies that poliomyelitis follows the main routes of travel, indicating that it is probably carried by human agencies. It spreads in waves over the country, the crest progressing steadily away from the focus. This suggests that in severe outbreaks practically everyone is exposed ,and, after all the susceptibles have been stricken, the epidemic subsides. The seasonal prevalence is quite marked, the large majority of cases occurring between the first of June and the last of November. In the southern hemisphere the seasons are reversed, the epidemics occurring between the first of December and the last of May. Out of 34 epidemics occurring during the last seventy-five years, 76 per cent. began in months of deficient rainfall and in 29 per cent. of them the dry weather lasted clear through. Twenty-four per cent. of the epidemics began in excess months, and in none did the wet weather continue clear through. In 18 epidemic wsith a total of 13,365 cases practically 90 per cent. of the cases occurred during deficiency months. The dryer the weather, in general, the greater has been the number of cases.

Nervous Women.

From puberty through the menopause we meet with many patients suffering, as Godell has aptly described, as the "intangible, impounderable, invisible pelvic pains of neurotic women," and these cases most frequently respond to the sedative and antispasmodic actions of Hayden's Virburnum Compound.

The nervous symptoms of early pregnancy or the threatened miscarriage or abortion are often prevented by the early use of Hayden's Virburnum Compound. While the nervous strain due to social functions, the exertions of dancing, or the decrees of fashion leading up to hysteria are usually based upon some pelvic trouble, here a sedative is indicated, as a rule an effectual treatment is found in giving Hayden's Virburnum Compound.

Prof. John B. Shoemaker in his "Materia Medical and Therapeutics," Professor Ellingwood in his text-book, "Materia Medica and Therapeutics," "The National Standard Dispensatory," and King's "American Dispensatory," all recommend the use of Virburnum Opulus in hysteria; while Professor Wilcox in his text-book of "Materia Medica and Pharmacy" speak highly of Virburnum Opulus in the nervous diseases of pregnancy.

Among all of the various acute and exhausting illnesses that afflict mankind, there is none that so generally results in distinct prostration as epidemic influenza, or La Grippe. Even the grippal infections which are uncomplicated or unaccompanied by serious organic changes are more than apt to leave the patient in a thoroughly devitalized condition after the acute febrile symptoms have subsided. It is for this reason that the treatment of La Grippe convalescence is of special importance. The anemic, debilitated ,depressed patient requires a systemic "booster" that will not only stimulate but revivify and reconstruct. It is distinctly wise, in such cases, to commence vigorous tonic treatment as early as possible, preferably by means of Pepto-Mangan (Gude), the hemic builder and general reconstituent. This standard hematinic increases the vital elements of the circulating blood and, by increasing the appetite and improving the absorptive and assimilative functions, quickly restores both hemic and general vitality.

Tolerance of Physical Exertion in Irritable Heart.—Lewis (British Medical Journal), contends that the only sure way of determining the tolerance of exertion in cases of so called irritable heart is by direct testing of the patient upon suitable drills. nI other words, the test of capacity for exertion should be the observed reaction to exertion. Certain specified drills are arranged in order of severity and duration, beginning with light exercise for fifteen minutes and increasing to very hard work for thirty miuntes. From a few days to a week are spent upon the two light fifteen minute drills and a week on each of the three thirty minute drills. If the case promises well, further hardening may be obtained by continuation of the severest drills for a week or so longer. The drills should be carried out under the guidance of instructors and the men should be examined frequently, immediately after the drills. The examinations should include getting the patient's own account of his symptoms, but no symptom should be given weight unless confirmed by the results of physical examination. Above all, no leading questions should be asked and no symptoms suggested. Breathlessness is one of the chief complaints, and it should be confirmed by the observation of drawn facies, dilatation of the alae nasi, activity of the accessory muscles of respiration, and interference with smooth speech. Precordial pain is another common complaint which must be confirmed by the discovery of sensitiveness over the precordial area, of the borders of the pectoral muscles, and even of the left arm, shoulder and root of the neck. This should be elicited by gently placing both hands on the chest symmetrically and noting the facial expression as increasing pressure is made bilaterally. Palpitation should be neglected, except in so far as it may point to a persistent or marked tachycardia. Tachycardia is relative, and the pulse rates must be considered broadly and in the light of the individaul responses. Giddiness is a symptom of little prognostic value. Fainting occasionally occurs, but is of no material significance. Its genuineness should be confirmed by the occurrence of a slow heart action. Simulation may be attempted, but can always be detected.

Cultivation of Globoid Bodies of Poliomyelitis.—Smillie (Journal of Experimental Medicine), believes it may be possible to cultivate globoid bodies from practically all cases from which suitable material is available, providing other conditions are right, such as proper samples of ascitic fluid, strict anaerobiosis for the inoculation tubes, transference at proper intervals, and above all, endless care and perseverance. It is difficult to establish the strain, and Smillie was unable to identify the globoid bodies in the first generation, as the original investigators did. However, organisms identical in morphological and cultural characteristics with the globoid bodies of Flexner and Noguchi were obtained in twenty-two cultures from the tissues of seven monkeys suffering with experimental poliomyelitis. Twenty of the strains were cultivated from the central nervous organs, all but one being from the cerebrum, and this single exception was cultivated from the cervical portion of the spinal cord. Two strains were cultivated from the spleen. This is the first time that the globoid bodies have been reported as being isolated from organs other than those of the central nervous system. It was not possible to produce typical poliomyelitis in monkeys by inoculation with the cultivated strains. The streptococcus played the role of a common contaminant, and in no way was there any indication of its being a factor in the pathology of poliomyelitis.

Chloramine as an Antiseptic in Ophthalmology.—F. de Lapersonne (Presse Medicale), found a 0.5 per cent. solution of sodium hypochlorite too irritating for use as a collyrium. A 0.1 per cent. solution proved bearable in gonococcal conjunctivitis, but the results were no better than those obtained with permanganate solutions. A one per cent. chloramine collyrium was found quite painless. Two or four per cent. solutions caused a temporary stinging sensation—less, however, than with zinc sulphate—and slight conjunctival redness lasting five minutes. An ointment based on agar agar and containing one or two per cent. of chloramine was as well borne as the chloramine collyria. Therapeutically, these preparations proved very active. nI two cases of purulent conjunctivitis in the newborn they were used independently of other measures. One case was clearly gonococcal and showed a central ulceration of the cornea which yielded and healed in three days under two per cent. chloramine; in this case silver nitrate had already been used a week. Both cases made rapid progress under the chloramine. In several cases of severe ulceration with hypopyon, the use of a two per cent. ointment morning and evening resulted in healing of the cornea. The chloramine seemed greatly to favor elimination of the necrotic tissues; by the third day the ulcers showed clean bases, ready for epithelial repair. In conjunctival sacs with long standing suppuration from enucleation or severe lid involvements, favorable effects seemed to be produced. Application of chloramine preparations for a week or two made it possible to carry out autoplastic operations previously not feasible. nI conclusion, De Lapersonne regards chloramine as a powerful antiseptic, well borne by the conjunctiva in collyria up to four per cent, and in ointments, if a suitable excipient be selected.

Coxa Vara and Obesity.—Kirmisson (Bulletin de l'Academie de Medecine), includes, under the term coxa vara, two abnormalities, viz., a special morbid posture of the lower extremity characterized by a combination of external rotation with abduction, and a sagging of the femoral neck, which forms a right or acute angle with the shaft of the femur. Thus defined, coxa vara occurs under two different conditions: in young children, in whom it is generally accompanied by the other customary signs of rickets, and in adolscence, when, as in the case of the other skeletal deformities met with at that time, it usually occurs alone. As regards the cause of the adolescent type of coxa vara, the author was struck some years ago by the observation of a family in which three children had coxa vara and were all obese. The mother likewise suffered from obesity. Numerous cases since met with have convinced him of a close relationship between obesity and not alone coxa vara, but also epiphyseal separation at the upper end of the femur and the local disturbance which leads to "fruste" coxalgia. The three latter conditions, moreover, are themselves allied, sometimes occurring in association in several members of the same family. Thyroid insufficiency is probably the cause of the obesity underlying these conditions.

The thyroid gland seemed hypoplastic in the author's cases, and the pasty features and facial puffiness suggested myxedema. X-ray examinations for pituitary enlargement in two cases were negative. In a male patient aged sixteen the genitals seemed underdeveloped, and in a girl of twelve, 1.53 metres tall and weighing 61 kilograms, menstruation had not yet appeared. Treatment by mechanical extension and thyroid gland internally yielded some benefit.

Cerebral Tetanus.—Berard and Lumiere (Bulletin de l'Academie de Medicine), refer to the recognized view that tetanus spares the cerebral centres and that the absence of mental disturbance is of import in the differentiation of tetanus from meningitis. In the last year, however, they have encountered eleven cases of tetanus with cerebral disturbance, all in patients who had already received one or several injections of antitetanic serum. Most of the cases were instances of late tetanus, the first symptoms appearing in a period ranging from twenty-two to seventy days in eight of the eleven patients. The cerebral disturbances generally appeared only one or two weeks after the contractures. The interval between the tetanus symptoms and the cerebral involvement ranged from seven to thirty days in no less than nine of the eleven cases. Five have no trismus and five others only slight trismus. The single case which died was that with the shortest incubation period—ten days—and with the shortest interval—five days—between the contractures and the cerebral symptoms. The latter comprised hallucinations, delirium, restlessness and morbid fear with nocturnal exacerbation. These symptoms began suddenly and with maximal intensity, remained constant for eight or more days, then gradually diminished, complete disappearance taking place as a rule only after fifteen to twenty days. No fever ever accompanied the mental disturbances save in the fatal case, and in this it was due to a coexisting local infection. Having noted but one instance of cerebral tetanus among over eighty cases of tetanus seen before June, 1916, the authors ascribe the recent massive incidence of such cases to the changes in treatment introduced since that time. Hitherto cases succumbed as soon as the tetanus toxin had ascended as far as the medulla. At present, however, as a result of improved methods and the free use of serum, sodium bisulphate, and regional anesthesia, the bulbospinal system is enabled to escape lethal involvement and the poison continues its ascent, with attenuated effects, to the cerebrum.

Aposthesine: Suggestions for Use.

This product is applicable in any procedure in which a local anesthetic is indicated. It is supplied in hypodermic-tablet form. The strength of solution (in water or physiologic salt solution), and the quantity to be injected, should be determined by circumstances. Solutions generally used range in strength from 0.5 to 3 per cent., the weaker solutions when the anesthetic is to be applied to rather extended areas. The strength of solution generally preferred in surgical operations is 1 per cent. In dental work the 2-per-cent solution is usually employed. Solutions of Apothesine act more slowly than those of cocaine, hence more time should be allowed for them to produce the required degree of anesthesia.

Apothesine is widely used in such operations as removal of tonsils and hypertrophied inferior turbinates, excision of thyroid, removal of gall-stones, prostatectomy, excision of carcinoma, plastic operation on the mouth, circumcision, laparotomy, resection of the femur, suprapubic cystotomy, inguinal hernia, sacral nerve blocking, breast amputation, vaginal hysterectomy, gland excision, wound stitching, gastrotomy, exploratory tracheotomy, enucleation of the eye, etc.

General Loss of Reflexes After Wounds of the Skull.—Souques (Bulletin de l'Academie de Medecine), has seen five cases in which a wound of the cranium was followed by abolition of all or nearly all the tendon reflexes. None of the signs ordinarily accompanying loss of reflexes, such as pain, anesthesia, hypotonia, motor incoordination, paralysis, etc., were present in these cases. The loss of reflexes might easily have been overlooked—a circumstance indicating the advisability of examining for the reflexes in all cases of skull injury. The reflexes were probably lost very soon after the injury, during the acute stage of traumatic meningitis. In at least one case the reflexes have remained absent for two years, and they will probably have been permanently lost. In no case was there a history of any disorder causing general loss of reflexes, e. g., toxic or infectious multiple neuritis, anemia, cachexia, tabes, etc. In all instances evidence of an actual, though usually mild, traumatic meningiti sis available.

Lumbar puncture several months after the beginning of the disturbance showed high pressure and excess of albumin in the spinal fluid. The cause of the loss of reflexes is doubtless some change in the posterior roots—in the so called radicular nerve—due either to the traumatic infectious process, to the increased intraspinal pressure, or to both of these conditions.

Biological Service.

The importance of proper storage conditions for biological products is well known. In sections of the country where there is a limited demand for biological items, the problem of securing potent products has had a deterring influence on the use of indicated vaccines or serums. Not infrequently the use of improperly stored or out-dated biologicals has resulted in a condemnation of the manufacturer's label and a mental resolve not to specify any more of that particular maker's product.

The complete distribution of Lilly Biological products and to replenish that stock frequently by making use of the service facilities offered by the wholesalers, who carry the complete Lilly line in refrigerator storage. In specifying Lilly Biologicals, therefore, the physician has every assurance that, whatever his needs, there is reason to believe that the particular product he desires will reach him in the best condition.

It is the idea of quality, service and satisfaction, so long associated with this well-known manufacturer's label, that has brought its biological line to the fore and resulted in constantly increasing specifications for biologicals bearing the Red Lilly mark.

The season of typhoid and para-typhoid fevers is at hand; physicians will be administering this vaccine extensively. The attention of our readers is called to the excellence of the Lilly Products, their availability and potency and to the fact that Typhoid Mixed Vaccine is to be preferred ordinarily, because of the immunity it confers against the para-typhoid as well as the typhoid infection.

Blood Transfusion.—Ameuille (Bulletin de l'Academie de Medicine), notes that the ideal method in blood transfusion is to collect the blood of the donor through a needle and inject it similarly in the recipient, thus avoiding any incisions or serious vascular injury. With Queyrat's needle, 300 to 500 mils of blood can be withdrawn from the vins at the bend of the elbow in a normal subject. The puncture with Queyrat's needle causes but little pain and cannot give trouble in any way. The blood as it runs out is collected in a sterile receptacle containing about 0.1 gram of sodium citrate for each 100 mils of blood to be withdrawn. Enough water will be present in the receptacle if the citrate is merely dropped in it in the dry state and the receptacle then sterilized in the autoclave. The receptacle should be continuously shaken while the blood is dropping into it. The blood is then reinjected in the recipient from a wash bottle connected with a rubber bulb as though an intravenous saline injection were being given. By this method the blood can be kept—at 37 deg. C.—as long as four days without harm to the recipient. At the front the author has found it feasible to provide for emergencies by keeping several bottles of citrated blood in the incubator. With so easy and harmless a method donors are easily found, and a single donor can without inconvenience supply additional blood two or three weeks after the first withdrawal. As the blood can be kept for a time, it can be carefully watched to make sure that it does not undergo spontaneous hemolysis. Time is also given for carrying out a Wassermann test with it in the case of a suspected donor. The entire procedure of transfusion is so facilitated that it becomes available not only for posthemorrhagic anemies but also for certain medical anemies and even for infections or dycrasic states.

Trophic Disturbances in Gunshot Injuries of Peripheral Nerves.—B. Stopford in The London Lancet, concludes from a study of the manifestations of trophic disturbance and the examination of an amputated leg in a case of recent gunshot injury of the nerves that many of the changes in the tissues are due to a reduction in the blood supply of the part. This reduction in blood supply comes from an endarterial alteration which in turn, is due to the irritative nerve lesion. Similar instances of endarteritis have been recorded in cases of peripheral neuritis from other causes. The diminution in blood supply is limited to those parts supplied by arteries innervated from the affected nerve. The results of such reduction in blood supply are seen in muscular contracture, decalcification of bone, and various skin disturbances including glossiness and ulceration.

Torpid Inflammatory Reactions in Cancellous Bone Tissue.—De Gaulejac and Nathan (Presse Medicale), note that wounds of spongy bone tissue by war missiles are accompanied by remote lesions with bloody infiltration. These lesions very frequently become the seat of inflammatory reaction, which is grave and obstinate because of the extent of tissues involved. Symptoms may be absent for weeks. Slight pain at the point of entrance of the projectile is alone present to suggest a slight tissue reaction. While the temperature remains practically normal, the pulse exhibits a range of from eighty to one hundred, and is a more precise indication of latent infection than thedmometric readings. The second stage occurs after the wound has completely healed and is marked by a secondary, subacute osteoarthritis. Many of the joint disturbances following wounds of the articulations, and the origin of which is as yet obscure, are probably the result of an extending osteitis that has started from the focus of contusion. Under such circumstances, excision of the contused and infected osseous lesion completely overcomes the difficulty. In over one-fourth of all cases these bone lesions are accompanied by a true septicemia, demonstrable by blood culture. This occurs especially where the missile has been retained, and disappears with its removal. There is, however, no violent constitutional reaction. The course of the infection varies greatly in dofferent cases. It is manifest promptly, and runs a subacute course where there is an open wound. When the wound is closed, it runs a chronic course. The pathological change taking place is a dry necrosis of the spongy tissue, with decalcification as its predominating feature.

Alkaline Treatment of Eclampsia.—Maldonado (La Cronica Medica), has found that the normal alkalinity of the blood of sixty per 1,000 is reduced in eclampsia to forty or even thirty. If the patient is first seen in the interval between attacks he gives 0.1 gram of morphine sulphate by hypodermic and also four grams of chloral hydrate by rectum in fifty c. c. warm water. This treatment usually prevents recurrence of attacks. If the patient is seen during an attack, the morphine is given and the quiet stage awaited before giving the chloral enema. Maldonado considers that chloroform is contraindicated, as he has shown that any anesthesia reduces the normal alkalinity of the blood tissues. One quarter of an hour after the chloral enema he gives another enema with fifty grams sodium bicarbonate in 400 c. c. warm water, which is best given by the Murphy drip method. Later he gives potassium bromide or chloral by mouth every two hours followed the next day by a saline purge. On subsequent days a diuretic treatment is continued with potassium nitrate or acetate in uva ursi and oxymel of squills, a milk or salt free diet is given, with small doses of bromide and chloral three times daily to maintain a state of low nervous excitability.

Operative Treatment of Gangrene of the Lung.—The surgery of the lung is making rapid progress in our generation and no one has done more to advance it than Professor Sauerbruch, of Zurich. At a recent clinical meeting at the Cantonal Hospital, he showed a case of extensive gangrene of the lower lobe upon which he had operated a week earlier. The essential points to observe in such an operation are the protection of the pleura by tampons from secondary infection and the removal of large portions of the costal wall in order fully to expose the gangrenous surface and secure good drainage. The results of operative interference in such cases are fairly satisfactory, when it is remembered that a large proportion do not reach teh surgeon until their condition is desperate. Sauerbruch lost 13 out of 37 on whom he operated. He also demonstrated a case of gunshot wound in which gangrene of small extent had occurred in the lung from which he therefore removed the bullet with ensuing recovery.—London Lancet.

Malignant Disease After Injury.—Lazarus-Barlow (British Medical Journal), refers to the common belief that malignant disease is likely to develop following injury, and points out that, in face of the enormous number of injuries being sustained in the war, fear of the occurrence of carcinoma or sarcoma may arise. So far as squamous celled carcinoma of the skin is concerned this fear can be set at rest, for an alysis of over 10,000 records of malignant disease show that there were less than one per cent. of cases of cancer of the trunk or extremities and that among these only a very small portion was associated with cicatrices. Sarcoma was found to make up only about nine per cent. of all cases of malignant disease and the direct association of the disease with injury was very uncommon. The probability of a given soldier's developing malignant disease as a result of his injuries was, therefore, very slight.

X-Ray Appearances of Trichiniasis.—Claude Gouldesbrough, in The London Lancet, calls attention to the fact that after sufficient time had elapsed from the initial stages of trichiniasis to permit of calcification of the trichinae the use of the X-ray permits the making of a positive diagnosis with ease. The calcified lesions show up in the plates as small ovoid discs of various sizes, located in the muscles and definitely not attached to bone. In some of the areas the centres of the discs show clear. Such findings may occur as early as three months after the acute attack, but usually a period nearer to six months is required for calcification.

An Epetomized Clinic.

Ashton in his "Practice of Gynecology" rightfully says, "Many women recover their health and the pelvic organs assume their normal function without an operation," and he further states, "Operations during the acute stage of an infection have a high mortality and the pelvic organs are often unnecessarily sacrificed."

Except in certain cases, a waiting policy can be carried out. Local treatment, together with the giving of Hayden's Virburnum Compound, will oftentimes accomplish a better after result for the patient than an abdominal operation can do. The day for operatin on every little pelvic trouble is now, we trust, happily passed.

Logical treatment demands that certain general and hygienic measures should be used, such as rest, diet, care of bowels, proper clothing and vaginal douches, etc., and with this general building up of the health there should be a toning up of the uterine muscles, and this can be accomplished by the giving of Hayden's Virburnum Compound.

Minor Maladies in Flying Men.—Surgeon Panter (Journal of the Royal Naval Medical Service), says that during the past eighteen months his duties have led hi minto the hitherto somewhat unstudied, or perhaps more correctly unpublished, sphere of sickness associated with flying. While many inexplicable symptoms attributed to lack of oxygen and other abstruse causes do undoubtedly occur, he has time and again been much impressed by the simple explanation of various ailments complained of by pilots as "coming on" whilst in the air, and frequently on questioning has obtained a history of "feeling out of sorts" before going up. Although there is nowadays an explanation for most of the fatal accidents occurring in the air services, there is always a percentage in which the cause remains a mystery. The writer is convinced that in a large proportion of these mysterious crashes the cause is loss of consciousness by the pilot. The doctor has had at least four cases of pilots completely losing consciousness in the air. Two of these "crashed" on trying to land, which apparently they did subconsciously, without severe injury to themselves, the other two both lost consciousness at a height, subsequently regain it, and were able to recover control of the machine and make safe landings, both feeling extremely ill. The doctor has often noticed how greatly any alimentary disturbance becomes exaggerated in the air, and several cases of vomiting while flying have occurred apart from vestibular vomiting experienced by some pilots on extremely "bumpy" days. In these cases also the pilot, on questioning, has admitted having had slight indigestion before going up. A common cold when accompanied by much nasal catarrh will often give rise to great trouble at a height, and especially during rapid diving, and several times pilots with this condition have come for advice wishing to ascribe their symptoms to a "lack of oxygen," but with the curing of the cold the trouble ceases. In one case epistaxis accompanied the difficulty in breathing in a pilot flying with severe nasal catarrh. This pilot had never experienced any signs of distress, though he had done regular patrols of one or two hours' duration at 17,000 to 18,000 feet during the past three months.

It is extraordinary, considering the number of high patrols, 17,000 to 20,000 feet, carried out daily by the wing to which Surgeon Panter was attached how rare it was to find any pilot with symptoms attributable to lack of oxygen. The writer is convinced that there must be certain factors which tend to compensate for the decrease in atmospheric pressure. Intrapulmonary pressure is probably augmented, with increased ventilation of the air cells, so that what is lost in quality of inspired air is to a certain extent made good in quantity. For efficiency in the air, robust health is essential. Any minor disability becomes greatly accentuated when the general nervous system is at high tension, as during flight, and there is not the slightest doubt that many "crashes" and "nervous breakdowns" could be averted if all minor maladies were taken in time and brought under treatment.

Modern Treatment of Empyema by Antiseptics.—Stoney (Brit. Med. Jour.), concludes as follows: 1. Most, if not all cases of empyema can be cured without resort to such mutilating and dangerous operations as thoracoplasty and pulmonary decortication, because it is not necessary to obliterate the pleural space, but merely to render its walls sterile, and this is possible by frequent washings with hypochlorite solutions. 2. Flushing of the pleural cavity with hypochlorite solution is not dangerous provided that there is a free exit for the fluid, as by the use of a double drainage tube. 3. The earlier the treatment is instituted, the sooner and more surely will a cure be obtained, as there will be less formation of graulation and scar tissue, and the organisms will not have had time to entrench themselves deeply in the tissue, and will therefore be more exposed to the action of the antiseptic. 4. The drainage should be free and the opening should not be valvular; if a Carrel tube is used, it should be introduced as far as possible into the pleural cavity through a large drainage tube, so that the fluid starting at the most remote part of the septic space passes down over its walls and escapes freely between the Carrel tube and the drainage tube. 5. The opening is most suitably made by removing one inch of the eighth rib in the scapular line, as this is the most dependent spot for practically all portions, and there is no fear of its closure by the rising diaphragm.

Complement-Fixation in Experimental Tympanosomiasis.—Woods and Morris (Jour. Infect. Dis.), studied complement-fixation with T. equiperdum with a view of determining the time of occurrence, the relation of the symptoms, its specificity and its relation to the Wassermann reaction, and to the effect of salvarsan. The antigen was prepared from the spleen tissue of infected rats. All of such antigens were not satisfactory because of the anticomplementary reactions. It was found that this antigen was as satisfactory as that prepared from the emulsion of the micro-organisms. Seven healthy dogs giving negative reactions with these antigens were infected with trypanosomes. The fixation reaction appeared in about eight days. The trypanosomes appeared in the blood before the reaction became positive. In only one animal did a positive fixation test precede the appearance of the trypanosomes. The fixation appeared to be specific. As the trypanosomes multiplied in the blood stream the sera of the dogs became anticomplementary. A variable and inconstant fixation of complement with the Wassermann antigen was also obtained. It was difficult to follow the effects of arsenobenzol treatment upon the fixation test because of the anticomplementary reaction. In one dog, however, treatment not only removed the trypanosome infection but also dissipated the anticomplementary and complement-fixation properties of the serum. They were able to demonstrate that by the addition of disintegrated trypanosomes to normal dog serum a moderate anticomplementary serum was produced.

The Problem of the Amebic Dysentery Carrier in India and Mesopatamia.—MacAdam and Keelan (Indian Jour. Med. Research), discovered Entameba histolytica in apparently normal stools of numerous cases in the surgical division of the hospital, as well as in the medical wards, other than those assigned to dysentery. A systematic examination was then commenced and the present report is based upon the protozoological investigation of over 2,000 men, mostly of the Mesopotamian field force, whose condition ranged from general good health to one associated with acute and chronic intestinal disturbances. Their records show that histolytica infection is so frequent that efforts at prophylaxis should be directed entirely to the purely sanitary aspect of the question. They believe that the segregation of any but the "gross" human carriers will remain an impossible and futile task until our therapeutic methods or the destruction of the cysts are more certain and effective. The results of treatment make doubtful the utility of attempting to clear men of histolytica infection while living under war conditions, or even while they continue to live in the tropics. Thus in a series of patients who gave an average of five negative examinations in hospital, after a residence of one week in the Convalescent Depot, a single re-examination of the feces revealed the persistence of the infective agents in one-half of the cases. This shows the futility of any scheme for the clearing of dysentery patients where the protozoological examinations are entirely confined to the period during which the patients are resident in hospital. Also since 17 per cent. of total number of histolytica carriers, which they detected, gave no past history of dysentery, or marked diarrhea, they question the military advisability of prolonged segregation of dysenteric convalescents, who are otherwise healthy. By comparison with the findings of Dobell (Medical Research Committee, Special Report Series No. 4, 1916), it is found that the incidence of protozoal infection is distinctly higher in the Mesopotamian troops examined while still in the tropics, than in those patients who have returned to a more temperate climate.

Impairment of General Nutrition and Skin Lesions.

That there is a most intimate relationship between the nutrition of the body in general and its integumentary envelope is shown by skin lesions (which had resisted local measures), becoming progressively better as improvement in bodily nutrition takes place. Among the agents exerting a nutritional influence upon the skin Cord. Ext. Ol. Morrhuae Comp. (Hagee), is of special value.

A tissue food of the highest order, it will be found of distinct advantage in those dermatic lesions the continuance of which depends upon disturbance of general nutrition.

Pyrogenic Therapy.—Auld (British Medical Journal), obtained little or no results from subcutaneous injections of various colloidal metals in cases of pneumococcal, streptococcal, and other infections, but the intravenous injection of such metallic preparations were somewhat more promising, especially when they were followed by some elevation of the patient's temperature. A sample of colloidal platinum was used which gave a very marked reaction after intravenous injection, including rigor, high temperature, sweating, nausea and vomiting, and headache. The use of this preparation was followed by strikingly good therapeutic effects. A fresh, protected sample of colloidal silver produced similar reactions and equally good results, and on trying the effects of the protective alone the same responses were obtained, including the therapeutic effects. This protective was a four-tenths per cent. solution of veal peptone with one per cent. of glucose. It was evident that the pyrogenic substance and the therapeutic agent was not the colloidal metal, but the peptone. The reaction was precisely similar to that produced by the intravenous injection of killed typhoid vaccine, proteoses, nucleic acid, etc., and it would seem that the colloidal metal played little, if any, part in the production of the results, since the injection of colloidal metal preparations which did not cause the pyrogenic shock also failed to manifest any therapeutic actions.

The Transmissibility of Pellagra.—Goldberger (Public Health Reports), subjected sixteen volunteers to experiment. With one exception all were men and varied in age from twenty-six to forty-two years. No restrains were imposed on their customary habits or activities. Seventeen cases of pellagra of various types and of different grades of severity furnished some one or more of the experimental materials. The materials were blood, nasopharyngeal secretions, epidermal scales from pellagrous lesions, urine and feces. Blood was furnished by 4 of the cases, nasopharyngeal secretions by 4, epidermal scales by 5, and urine or feces by 16, of whom 10 furnished both urine and feces, 3 urine without feces, and 3 feces without urine. Blood was administered by intramuscular or subcutaneous injection; secretions by application to the mucosa of the nose and nasopharynx; scales and excreta by mouth. Both urine and feces were ingested by 15 of the volunteers, 5 of whom also took blood, secretions, and scale. The experiments were performed at four widely separated localities (Washington, D. C.; Columbia, S. C.; Spartanburg, S. C.; and New Orleans, La.) at which different groups of the volunteers were assembled. Observation has been maintained by association with a majority of the volunteers and by visits of inspection, supplemented by reports from the volunteers themselves, 13 of whom are physicians, and by reports from other medical officers of the service with whom they are associated. During a period of between five and seven months none has developed evidence justifying a diagnosis of pellagra. These experiments furnish no support for the view that pellagra is a communicable disease; they materially strengthen the conclusion that it is a disease essentially of dietary origin, brought about by a faulty, probably "deficient" diet.

The Exercise of Common Sense in Present Day Therapy.

Experience has demonstrated pretty conclusively that it is unwise on the part of the physician, under present day conditions, to write prescriptions for extemporaneous preparations of potassium or sodium bromide because of the great danger that the drugs supplied, even by scrupulously honest druggists, will be widely variable in their quality and strength. The use of a preparation such as Peacock's Bromides, however, obviates this danger, since conditions which enter into its manufacture insures a product of the highest quality and constant unchanging character. It is the difference between preparations of **unknown and known responsibility.** Peacock's Bromides are put out by a responsible firm that has been serving the medical profession for many years. They have taken pride in their product, and realized that its success depended on its merit and reliability. Is it conceivable that any firm would take any chance of jeopardizing their relations with the medical profession by abusing the confidence imposed in them? The idea is preposterous, for aside from the element of pride which, as above stated, plays no little part in the situation, ordinary common sense and business acumen lead every responsible firm to maintain their products at the highest point of excellence.

In connection with no preparation at the command of the profession has the foregoing been more evident than with Peacock's Bromides. Not only has every care been given to the selection of the salts entering into its composition, but equal attention has been paid to keeping the composite preparation true to its established standards. As a consequence, results have been obtained with degrees of precision and efficiency that have proven the superiority of Peacock's Bromides beyond all question, and been responsible for the steadily increasing host of medical men who have come to prefer this combination whenever the bromides are indicated.

Especially has it been gratifying to be able to use a preparation of active bromides so potent in sedative and antispasmodic effect, that, at the same time has been so free from gastric irritation or any other disagreeable effect, even when the nature of the case has required its prolonged administration.

It is evident that Peacock's Bromides has won the regard and confidence of thousands of American physicians. This would never have come to pass if this particular combination had not accomplished the results they have sought more satisfactorily than any other brobide preparation. These practitioners, keen, capable observers, have found Peacock's Bromides a safe, effective and reliable nerve sedative. They have used it, and will continue to do so, because it has justified their confidence. Ill founded prejudices can never controvert the knowledge an intelligent physician has acquired from his own experience.

The Use of Insecticides Against Lice.—Bacot (Brit. Med. Jour.), made an attempt, in performing these experiments, to arrange the conditions on as nearly natural a basis as was possible. In order to test the relative effects of contact and diffusion of several insecticides, an apparatus was designed consisting of wire gauze frames which could each be covered by a small gauze bag; each constituted a series of five small cages so arranged that they could be tied against the skin. In the central chamber was placed a 1-inch square of thick lint saturated with the substance to be tested, and lice were placed in all five of the chambers. Several gauze bags containing no insecticides were included as controls, which were placed between the others to ensure no interference of the substances tested with each other's action. These tests were usually of eight to twelve hours' duration. The substances tested were naphthalene, sulphur, cresylic acid, iodoform, vermigelli, a prepared insecticide, combinations of this with phenol and cresylic acid, a mixture of vaseline, naphthalene, kerosene and benzole and cytisine, an alkaloid having physiological properties similar to those of nicotin. The net results of these tests show that the diffusive effects of all the substances except possibly naphthalene is so slight as to reduce them all to contact remedies. Therefore, it is necessary to saturate or thoroughly dust underclothing with them to obtain any effect. If naphthalene is used in some form in which the garments can be impregnated with it, it is a very good insecticide and the chief objection which can be offered to it is the fact that it evaporates very rapidly. Tests were also made to investigate the effectivenss of remedies in preventing breeding when used to impregnate clothing. Flannel was saturated with the various remedies listed above, and the lice placed in contact with it for several hours in order that eggs might be laid and developed. In these tests an emulsion of soft soap and crude liquid carbolic acid was also used. This last was found to be the best remedy for impregnating clothing to prevent the spread of lice. Flannel was treated with the various remedies and, after two days, insects were placed in contact with it and the results noted. In these tests also the emulsion of soft soap and carbolic was found to be the most effective, the practical effect of impregnation with it lasting about six or seven days and the smell have a slight effect for several days longer. Therefore a very practical insecticide for preventing the spread of lice among troops is an emulsion of 45 to 50 per cent. soft soap combined by heating with 50 to 55 per cent. crude carbolic. A 5 per cent. solution of the emulsion in warm water should be used to impregnate the garments, which should then be wrung and thoroughly dried before wearing.

War Neuroses.

Nervous collapse and allied disorders of the Nervous System resulting from the strain occasioned by the Great War are very frequent. The rational treatment, as also the prevention of these disorders includes the building up of both the general and the nervous systems by the administration of Fellows' Syrup.

"It is a food for the nerves," wrote a physician in the British Isles, adding that in his hands, during 10 years of almost daily use, Fellows' Syrup yielded results unattainable by the administration of other preparations of the Hypophosphites.

There are many imitations, but only **one Fellows' Syrup**. It has stood the crucial test of years of clinical application in all parts of the world.

Treatment of Stiff Joints.—Jones (Brit. Medic. Jour.), discusses a series of hypothetical cases, types which occur over and over again as varieties of stiff knee. 1. First, assume that a small fragment of metal has penetrated the front of the knee-joint tearing the capsule and aponeurosis, but has been removed and the wound has healed without suppuration. The movement of the joint later is limited by pain localized to near the wound and a definite stop to movement. The knee is flexed unde ran anesthetic, one or two definite snaps are felt, and all is well. This is a simple case of a few fibrous bands about the capsule which were stopping movements. 2. Next, we will take a similar injury, followed by effusion and a brief mild suppuration in the joint relieved by cleansing and very temporary drainage. The movement of the knee is limited on atempting movement under anesthesia; no great resistance is felt, but there is a soft tearing sensation. The experienced surgeon stops at once. He is not breaking one or two bands but is tearing a diffuse soft fibrosis extending all through the joint, and the result of the assault wil lbe the formation of a more dense fibrosis. By waiting until the pathological changes are ended, movements may be restored in gentle stages of persuasively conducted alternate attack and rest. 3. In another case a piece of shell has torn the quadriceps above the aptella, and the muscle is firmly fixed down to the bone. If the surgeon attempts to flex the knee forcibly, he runs a big risk of fracturing the patella; but if he puts the limb on a back splint so as to relax the quadriceps completely, so that there is no strain on the scar, it may loosen in a few weeks and become merely a fibrous intersection in the muscle, and then movement of the knee may be commenced. 4. There has been a septic fracture of the femur and the quadriceps, especially the vasti, have become infiltrated—first, with toxic fluids and later by a matted fibrous tissue. Any attempt to stretch that by force is doomed to failure and will probably lead to a fracture of the patella. The best way of attacking such a case is to apply a splint which will allow of gradual flexion in stages. It may take two or three months to restore a range of movement of 45 degrees. With that range of movement the patient can walk with a little knee action and not merely with a stiff leg. After that by use and help he will gradually get more and more movement in the knee as the fibrous tissue becomes absorbed.

"I prescribe Tongaline very frequently as a remedy for excess of uric acid, which is often the cause of rheumatism, and it is my sheet anchor for that condition. I also find Tongaline very beneficial in muscular pains, due to a sluggish liver and inactive bowels. When a patient comes to me complaining of soreness all over, I place him upon Tongaline, and it has never disappointed me."

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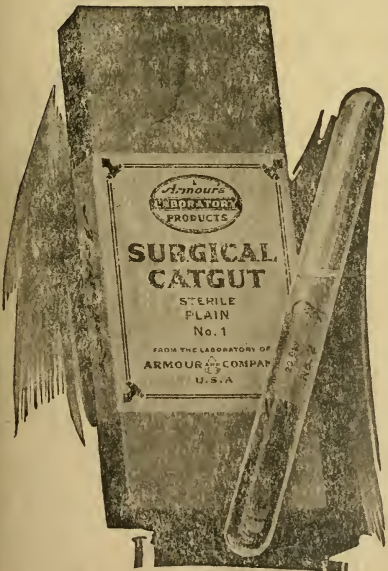

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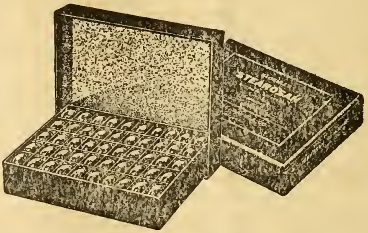

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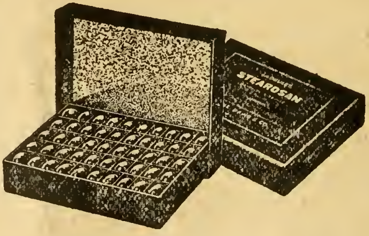

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Raleigh, N. C.
I. S. Stone, M. D., Pres.,
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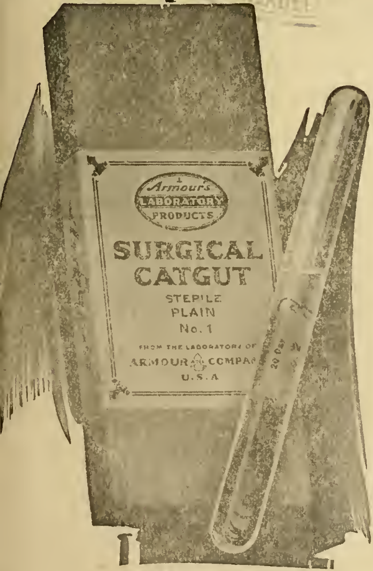

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